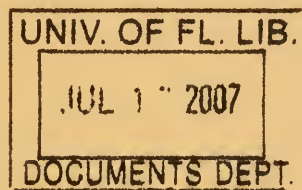


THE PANAMA CANAL RECORD

VOLUME 24

Gift of the Panama Canal Museum

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THE PANAMA CANAL RECORD

PUBLISHED WEEKLY UNDER
THE AUTHORITY AND SUPER-
VISION OF THE PANAMA CANAL

AUGUST 6, 1930, TO JULY 29, 1931

VOLUME XXIV
WITH INDEX

THE PANAMA CANAL
BALBOA HEIGHTS, CANAL ZONE
1931

THE PANAMA CANAL PRESS
MOUNT HOPE, CANAL ZONE
1931

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 6, 1930. No. 1.

Canal Traffic During July.

During the month of July, 1930, 488 commercial vessels and 10 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,180,511.82 and on the launches \$64.95, or a total tolls collection of \$2,180,576.77.

The daily average of commercial vessels was 15.74 and the average tolls collection was \$70,341.19, as compared with 15.93 and \$70,033.15 for the previous month, and an average of 17.00 transits and \$72,889.75 for July, 1929. The average amount of tolls paid by each of the commercial transits was \$4,468.23, as compared with \$4,395.39 for the month of June, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 7 months of the calendar years 1929 and 1928:

	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,576.77	15.74	70,341.19
Total, first 7 months of calendar year 1930.....	3,471	15,428,832.62	16.37	72,777.51
Total, first 7 months of calendar year 1929.....	3,755	16,023,664.05	17.71	75,583.32
Total, first 7 months of calendar year 1928.....	3,658	15,121,750.37	17.17	70,994.13

As compared with the first 7 months of the calendar year 1929, the corresponding period this year has had 284 fewer transits and \$594,831.43 less tolls.

Earthquake.

An earthquake in the afternoon of July 30, 1930, which was felt generally in the Canal Zone was reported upon by the Chief of Surveys in a memorandum for THE PANAMA CANAL RECORD as follows:

A heavy local seismic disturbance began 1: 51: 59 p. m. and ended 1: 57: 30 p. m., July 30, 1930. Two shocks were noticed, the first giving a low explosive-like sound. Distance and direction of epicenter was about 75 miles, probably to the southwest. Intensity V or VI; was generally felt over the Isthmus, the more so on Pacific side. No material damage. Telephone department reports "doors" on switch-board generally dropped. Some small plaster cracks on buildings. Quake in general like the one on March 7, 1930, and about same intensity. No special damage known in the interior, authority of Panama Telegraph Company, though quake was generally noticed by inhabitants.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, August 2, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	draught.			Nature.	Tons.	Gross.	Net.
Missionary ²	26	18.18	27	6.15	27	12.52	27	14.30	American.	443.1	59.8	20.5	Boston, Mass.	Portland, Oreg.	3,292	8,567	6,020
Pear Branch ²	26	23.20	27	6.20	27	13.12	27	14.30	British.	398.6	53.8	20.0	N. Shields, Eng.	Corral, Chile.	1,573	5,760	3,866
Sidney M.	27	3.05	27	7.20	27	14.05	27	15.25	American.	401.0	53.2	20.0	Baltimore, Md.	Tacoma, Wash.	4,765	7,082	5,167
Hauptman.	27	9.00	27	9.10	27	16.07	27	17.10	American.	480.0	66.0	21.11	Chester, Pa.	Los Angeles, Calif.	9,607	6,548	9,607
Chester Sun ²	27	10.45	27	10.55	27	17.48	27	21.55	American.	440.0	56.0	23.0	Baltimore, Md.	Portland, Oreg.	6,576	8,310	6,005
Hanley ²	26	21.55	27	11.15	27	18.35	27	19.40	German.	409.0	53.0	19.6	Hamburg, Germany	Valparaiso, Chile.	3,220	7,173	5,504
Adolf von	27	3.30	27	13.10	27	19.40	28	00.27	German.	360.0	51.0	17.1	Bremen, Germany	Champerico, Guat.	1,763	5,038	3,533
Erfurt ²	27	19.50	27	20.00	28	9.00	28	10.06	German.	395.5	55.0	26.0	New York, N. Y.	Vancouver, B. C.	7,074	7,330	5,245
Steluge ²	27	19.50	27	20.00	28	9.00	28	10.06	American.	225.0	41.0		Cristobal, C. Z.	Balboa, C. Z.		6	6
Bohvar ²	17	15.50	28	6.00	28	13.23			American.				Cristobal, C. Z.	Balboa, C. Z.			
Asterville ²	17	15.50	28	6.00	28	13.23			American.				Cristobal, C. Z.	Balboa, C. Z.			
Alphon	27	16.10	28	6.00	28	12.55	29	11.50	Norwegian.	435.0	56.0	18.8	Oslo, Norway	Vancouver, B. C.	3,350	8,005	5,953
Hilanger ²	27	20.25	28	7.10	28	13.38	29	13.10	Norwegian.	398.0	54.9	22.0	Santos, Brazil.	Vancouver, B. C.	5,887	8,854	5,124
Bassano City.	28	7.40	28	8.05	28	13.48	28	16.35	American.	424.2	56.2	26.0	Shobe, Ala.	Hongkong, China.	6,646	7,611	5,450
Curtis	26	17.40	29	5.55	29	14.11	29	23.25	American.				Cristobal, C. Z.	Balboa, C. Z.			
Caldas ²	26	17.40	29	5.55	29	14.11	29	23.25	Colombian.	116.0	21.0	8.6	Cristobal, C. Z.	Buenaventura, Col.	125	211	124
British	29	7.00	29	7.30	29	14.12	29	15.55	British.				London, England.	Los Angeles, Calif.		7,554	5,079
Governor ²	29	1.05	29	8.40	29	15.21	29	16.20	American.	410.5	54.3	19.3	Philadelphia, Pa.	Seattle, Wash.	3,175	6,572	4,900
San Vincente.	29	8.05	29	9.10	29	17.08	29	18.25	American.	324.0	46.2	19.0	Seattle, Wash.	Seattle, Wash.	2,500	3,983	2,631
Plov City	29	16.10	29	10.20	29	16.41	30	17.40	American.	380.0	48.7	22.0	New York, N. Y.	San Francisco, Cal.	2,864	6,033	4,353
Venezuela.	29	18.30	29	20.15	30	9.03	30	11.00	American.	404.6	50.4	16.3	Boston, Mass.	Seattle, Wash.	2,463	6,756	4,775
Montanan.	29	18.30	29	20.15	30	9.03	30	11.00	American.	420.0	57.8	19.0	Avonmouth, Eng.	Los Angeles, Calif.		7,132	4,658
Clydefield ²	29	22.45	30	6.12	30	12.35	30	15.35	British.	412.0	53.2	21.0	Heilingsfors, Finl'd	Los Angeles, Calif.		6,298	4,317
Santramis ²	29	2.25	30	8.00	30	14.27	30	15.35	American.	480.6	66.0	22.0	New York, N. Y.	Long Beach, Calif.		9,609	6,551
Pacific Sun ²	30	7.45	30	9.05	30	15.33	31	2.29	American.	360.3	51.7	22.0	New York, N. Y.	Taleahano, Chile.	1,539	5,957	4,325
Santa Elisa.	29	23.15	30	9.55	30	16.40	30	18.00	American.	550.3	72.2	21.0	Baltimore, Md.	Cruz Grande, Chile		15,476	4,354
Bethore.	29	23.15	30	9.55	30	16.40	30	18.00	American.				Baltimore, Md.	Cruz Grande, Chile			
Katrina	30	9.05	30	10.35	30	17.20	30	18.25	American.	446.0	56.0	22.0	Boston, Mass.	Tacoma, Wash.	3,989	8,508	6,179
Lukenbach.	30	10.55	30	11.25	30	18.17	30	22.47	British.	470.0	63.2	23.6	Montreal, Canada.	Talara, Peru.		9,191	5,278
Ontario ²	18	14.15	30	12.10	30	18.52	30	20.00	American.	296.1	45.0	17.7	Cristobal, C. Z.	San Francisco, Cal.	1,300	3,848	2,606
Dixie Arrow ²	30	15.25	30	15.40	30	22.05	30	23.31	American.	468.3	62.7	19.6	Boston, Mass.	Los Angeles, Calif.		9,744	7,140
Mississippi ²	29	6.00	31	6.05	31	16.02	31	17.25	American.	600.0	67.0		New York, N. Y.	Los Angeles, Calif.		8,746	5,725
Santa Maria ²	29	19.45	31	6.05	31	13.08	31	14.35	American.	460.0	60.0	20.6	Cristobal, C. Z.	Los Angeles, Calif.		8,746	5,725
Sun ²	31	00.40	31	7.15	31	14.05	31	16.30	American.	480.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.		9,620	6,476

² Tanker.

³ Launch.

⁴ Motor ship.

⁵ Gunboat.

Japan Arrow	31	00 55 31	7 45 31	16 48 31	18 00	American	Standard Transp. Co.	458.3	62 7 21 0	New York, N. Y.	Los Angeles, Calif.	Ballast	10,084	7,388
Michigan	31	07 05 31	8 35 31	17 00 31	100 25	Norwegian	Fern Line	335.3	54 8 26 0	Tampico, Mexico	Brisbane, Australia	Ballast	7,525	6,615
Illinois	31	10 30 31	10 30 31	17 41 31	21 00	American	The Texas Co.	416.8	56 1 20 0	Pt. Arthur, Tex.	Los Angeles, Calif.	Ballast	6,945	5,032
Liberia	31	9 25 31	13 45 31	22 11 31	1 27	Italian	Anglo-Saxon Pet. Co.	394.4	51 7 15 1	Havre, France	Los Angeles, Calif.	Ballast	6,535	4,320
Facile	29	17 00 31	14 10 31	20 56 31	22 00	British	Furness, Withy & Co.	435.0	60 6 22 4	Glasgow, Scotland	Vancouver, B. C.	General, bananas	1,741	9,633
Baron Wenyes	31	15 15 31	17 25 31	9 11 31	10 29	British	H. H. Hogarth & Sons	332.2	48 0 21 2	Glasgow, Scotland	Antofagasta, Chile	Coke	2,993	3,454
Betterton	31	17 15 31	10 40 31	11 47 31	13 00	American	Associated Oil Co.	431.0	59 2 21 0	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,863	5,104
Silver	31	18 15 31	6 10 31	12 36 31	13 45	British	Kerr S. S. Co.	456.0	61 9 21 6	New York, N. Y.	Singapore, Stra. Sed.	General	4,183	9,348
Chilore	31	19 05 31	6 20 31	13 51 31	15 10	American	Ore S. S. Corp.	549.0	72 0 22 7	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,950	4,866
Cubore	1	4 15 31	7 15 31	14 10 31	16 55	American	Ore S. S. Corp.	450.6	57 2 20 0	Baltimore, Md.	Cruz Grande, Chile	Ballast	7,950	4,866
Aconagua	1	6 25 31	12 25 31	18 40 31	20 38	Chilean	Chia. Sud. Amer. de Vap.	422.8	56 3 21 6	New York, N. Y.	Valparaiso, Chile	General	1,363	7,764
Antioquia	1	6 25 31	12 25 31	18 40 31	20 38	Chilean	Messageries Maritimes	413.9	60 3 21 6	Dunkirk, France	Noumea, New Caledonia	General	1,484	7,864
R. J. Hanna	1	12 20 31	14 15 31	13 55 31	22 00	American	Standard Oil Co.	435.0	56 2 22 6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,639	5,135
City of Bedford	2	00 15 31	6 25 31	13 20 31	21 50	British	Ellerman & Bucknall	430.0	55 1 25 0	New York, N. Y.	Adelaide, Australia	General	4,049	8,025
Pont San Pablo	2	2 40 31	6 55 31	14 30 31	2 15 30	American	Gulf-Pacific Line	324.0	46 0 19 6	New Orleans, La.	Seattle, Wash.	Gen., pig iron	2,330	3,994
Calif.	30	20 05 31	2 10 31	16 55 31	2 19 10	German	Rotund Line	216.0	32 0 14 3	Cristobal, C. Z.	Buenaventura, Col.	General	130	1,105
Auskan	2	10 45 31	2 11 31	17 00 31	2 19 10	American	Amer-Lawatan Line	415.0	35 7 19 10	Boston, Mass.	Portland, Ore.	General	3,643	3,380
San Jose	1	14 15 31	2 14 30	2 21 55 31	22 15	American	United Fruit Co.	380.0	36 6 18 8	Cristobal, C. Z.	San Francisco, Cal.	General	855	3,675
Fennett	2	14 20 31	2 14 30	2 21 55 31	3 54	Norwegian	Fern Line	382.0	32 0 23 0	New Orleans, La.	Fremantle, Australia	Gen., sulphur	6,852	6,112
Commander McCauley	2	16 40 31	2 16 40 31	2 16 40 31	3 54	American	U. S. Navy			Cristobal, C. Z.	Gatun, C. Z.	Ballast		4,284

* Asphalt, lubricating oil, etc.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Unity	27	11 40 28	12 30 28	20 15 28	21 32	American	O. V. Bolden	26.5	6 6	Bahoa, C. Z.	Cristobal, C. Z.	General	4,710	7,980
Takoka Maru	27	11 40 28	12 30 28	20 15 28	21 32	Japanese	Nippon Yusen Kaisha	445.0	58 0 16 0	Italo, P. I.	Boston, Mass.	General	21,300	15,551
Maryland	27	10 50 28	16 25 28	13 45 28	13 45	American	Standard Shipping Co.	550.3	73 2 34 0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	8,928	6,265
W. H. Tilford	27	10 50 28	16 25 28	13 45 28	13 45	American	Standard Shipping Co.	411.6	53 4 26 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	7,744	6,219
Belgian Maru	28	6 00 28	6 54 28	16 35 28	17 40	Japanese	Kobunsi Kisen Kaisha	385.0	51 0 27 0	Bahoa, C. Z.	Boston, Mass.	Sugar, hemp	581	1,572
Congo	28	6 30 28	8 18 28	17 40 28	17 40	German	Hamburg-American Line	227.2	34 4 13 4	Guayaquil, Ecuador	Cristobal, C. Z.	Ballast		1,011
Rolling Stone	28	6 30 28	8 18 28	17 40 28	17 40	Panamaian	Robert Wilcox	48.0	11 6	Bahoa, C. Z.	Cristobal, C. Z.	Ballast		27
J. L. Lockenbach	28	15 15 28	16 07 28	23 05 28	1 50	American	Lockenbach Line	448.9	60 2 28 0	Portland, Ore.	Boston, Mass.	General	8,000	9,294
England Maru	28	15 40 28	17 40 28	23 05 28	1 15	Japanese	Kobunsi Kisen Kaisha	385.0	51 0 27 5	Manila, P. I.	Atlantic coast, ports	Sugar	7,430	6,214
Dunworth Chief	28	18 30 28	6 02 28	14 00 28	17 00	American	Pennsylvania Ship. Co.	435.0	56 0 26 2	Los Angeles, Calif.	New York, N. Y.	Gasoline	10,000	7,441
Scottish Chief	28	20 30 28	6 52 28	14 50 28	17 50	British	Anglo-Saxon Pet. Co.	441.0	57 0 27 0	San Francisco, Cal.	United Kingdom	Gasoline	9,476	5,077
Oakland	29	6 00 29	7 19 29	15 30 29	20 50	German	Hamburg-American Line	433.3	50 1 26 0	Vancouver, B. C.	Antwerp, Belgium	General	6,571	8,510
Facile	28	21 40 29	7 44 29	15 25 29	15 25	British	Furness, Withy & Co.	436.0	60 0 27 2	Vancouver, B. C.	Glasgow, Scotland	General	7,927	9,725
Ranger	29	3 30 29	8 04 29	16 05 29	16 05	Dutch	Holland-American Line	469.7	58 3 24 0	Vancouver, B. C.	Rattienham, Holland	General	8,306	8,514
Winipoko	29	6 00 29	8 07 29	16 05 29	16 05	American	Williams S. S. Corp.	386.8	52 2 20 0	Portland, Ore.	Baltimore, Md.	Lumber, general	4,179	5,680
Doedel	29	7 10 29	9 10 29	17 10 29	17 10	American	Redwood Line	386.8	52 2 20 0	Seattle, Wash.	New Orleans, La.	General	3,450	5,705
Eagle	29	8 25 29	9 43 29	17 40 29	18 45	American	Standard Transp. Co.	410.0	56 3 28 0	New York, N. Y.	New York, N. Y.	Gas oil	8,628	8,201
Santa Maria	29	8 00 29	10 35 29	19 45 29	31 05	American	Union Oil Co. Calif.	409.9	54 2 31 0	Los Angeles, Calif.	Cristobal, C. Z.	Diesel & fuel oil	13,000	8,746
West Cape	29	10 35 29	11 31 29	19 15 29	19 15	American	McGormick S. S. Co.	409.9	54 2 31 0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	7,930	5,566

** Coffee, cocoa, ivory nuts, and hides.

** Towing Balboa No. 2.

* Motor ship.

* Yacht.

* Launch.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Astral ¹	29	13	05	29	13	57	29	22	05	American	Standard Transp. Co.	439.5	58.0	29.0	Los Angeles, Calif.	New York, N. Y.	Light fuel distil.	10,241	8,913
Hawaiian	29	13	06	29	14	06	29	21	25	American	Amer.-Hawian Line	404.0	53.9	23.0	Portland, Oreg.	Boston, Mass.	General	4,369	6,766
Charles	29	15	35	29	16	28	29	23	45	American	Arrow Line	409.7	54.2	24.0	Chemainus, B. C.	Boston, Mass.	Lumber	6,731	6,693
Christenson.	26			26	21	32				American	O. V. Borden	48.3	12.8		Balboa, C. Z.	Cristobal, C. Z.	Lumber	855	1,105
Borden No. 2 ¹	30	12	30	30	13	33	30	20	05	German	Roland Line	216.3	32.9	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	6,385	6,205
Cal.	30	15	00	30	16	19	31	11	35	American	Kellogg S. S. Corp.	390.0	54.2	25.0	Maunaloa, P. I.	New York, N. Y.	Coconut oil	1,897	5,710
Ruth Kellogg ¹	30	13	00	30	16	17	31	13	08	American	Panama Mail S. S. Co.	360.2	51.6	22.0	San Francisco, Cal.	New York, N. Y.	General, coffee	4,451	5,928
El Salvador	30	13	00	30	16	17	31	13	08	American	Panama Mail S. S. Co.	360.2	51.6	22.0	San Francisco, Cal.	New York, N. Y.	General, coffee	4,451	5,928
Nicole	30	22	50	31	6	29	31	14	10	Danish	A. P. Moller	374.8	52.2	20.3	Port Limon, P. I.	Providence, R. I.	Sugar, lumber	1,198	12,977
Maersk ¹¹	31	5	30	31	7	16	31	14	05	Italian	S. Calasstrini De Luca	290.9	41.7	14.5	Tacabuanu, Chile	Genoa, Italy	General	276	2,597
Oratio ¹¹	31	5	30	31	7	16	31	14	05	Italian	S. Calasstrini De Luca	290.9	41.7	14.5	Tacabuanu, Chile	Genoa, Italy	General	276	2,597
Champerico	31	5	30	31	7	16	31	14	05	British	Pacific Steam Nav. Co.	505.1	61.8	25.0	Champerico, Guat.	Cristobal, C. Z.	General	276	2,597
Mathew	31	7	35	31	8	13	31	15	05	American	Lukenbach Line	434.3	57.7	23.0	Portland, Oreg.	Mobile, Ala.	General	4,589	7,977
Lukenbach.	31	8	50	31	10	15	31	18	35	Norwegian	Caucasian Oil Co.	408.3	55.3	26.0	Los Angeles, Calif.	Avonmouth, Eng.	Gasoline	8,569	6,425
Clur, Th. Boe ¹¹	31	13	00	31	14	05	31	21	25	British	Donaldson Bros., Ltd.	387.0	53.7	25.4	Victoria, B. C.	Glasgow, Scotland	Gen. fresh fruit	5,715	6,719
Medavia ¹¹	31	14	35	31	15	28	31	19	30	British	Ben Line, Ltd.	439.0	54.0	25.4	Portland, Oreg.	London, England	Gen. (s)	8,200	6,526
Bonemarchan	31	14	35	31	15	28	31	19	30	British	Ben Line, Ltd.	439.0	54.0	25.4	Portland, Oreg.	London, England	Gen. (s)	8,200	6,526
Amerikaland ¹¹	31	18	25	31	19	23	31	13	05	Swedish	Ore S. S. Corp.	561.0	72.0	24.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,680	15,560
Henderson ¹¹	31	19	53	31	20	13	31	13	25	American	Ore S. S. Corp.	483.0	61.0	21.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,680	15,560
San Jose.	31	16	32	31	16	32	31	14	15	American	United Fruit Co.	320.0	44.6	18.0	San Francisco, Cal.	Hampton, Rias, Va.	General	631	379
American Star.	1	5	15	1	7	01	1	15	50	American	United Fruit Co.	320.0	44.6	18.0	San Francisco, Cal.	Hampton, Rias, Va.	General	631	379
El Cervo	1	2	30	1	8	06	1	16	35	British	Charles Nelson & Co.	386.8	52.2	24.2	Seattle, Wash.	Baltimore, Md.	General, lumber	6,179	5,699
Ryukyu Maru	1	6	40	1	8	35	1	16	35	British	C. T. Dorrington & Co.	387.4	52.2	26.0	Seattle, Wash.	Baltimore, Md.	General, lumber	6,179	5,699
Agaveville ¹¹	1	6	40	1	8	35	1	16	35	Japanese	Kanaiishi Line, N. Y.	385.0	51.0	25.4	Seattle, Wash.	Baltimore, Md.	General, lumber	6,179	5,699
Agaveville ¹¹	1	6	40	1	8	35	1	16	35	American	U. S. Navy	223.0	41.0		Balboa, C. Z.	Cristobal, C. Z.	Crude oil	7,302	5,919
Agaveville ¹¹	1	6	40	1	8	35	1	16	35	American	U. S. Navy	223.0	41.0		Balboa, C. Z.	Cristobal, C. Z.	Crude oil	7,302	5,919
Gen. Wm. M. Graham ¹⁶	1	4	40	1	9	32	1	17	55	American	Richfield Oil Co. of Cal.	429.3	59.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	9,287	7,720
Heider	1	8	00	1	10	25	1	18	55	American	U. S. Army	100.2	32.0		Balboa, C. Z.	Cristobal, C. Z.	General	3,578	5,117
Brail.	1	9	15	1	10	45	1	19	20	Dutch	Royal Neth. S. S. Co.	361.4	49.8	20.0	Corral, Chile	Hamburg, Germany	General	610	1,182
Canadian	1	9	15	1	10	45	1	19	20	Dutch	Royal Neth. S. S. Co.	361.4	49.8	20.0	Corral, Chile	Hamburg, Germany	General	610	1,182
Constructor.	1	12	00	1	12	50	1	20	05	British	Can. Nat. Steamships	430.0	56.2	20.0	Auckland, N. Z.	Montreal, Canada	General	2,000	7,680
Ludwigshafen.	1	16	00	1	16	47	1	22	45	German	North German Lloyd	393.4	54.3	26.2	Tacabuanu, Chile	Bremen, Germany	General	7,817	6,600
Zenon.	1	16	30	1	17	21	1	22	45	French	French Line	425.0	55.0	24.0	Corral, Chile	Le Havre, France.	General	7,708	6,982
Atlantic Sun ¹	1	18	22	1	18	22	1	23	20	American	Sun Oil Co.	429.3	59.2	25.0	Los Angeles, Calif.	Chesapeake, Pa.	Gasoline	8,994	7,567
Chilop.	1	20	40	1	20	63	1	24	25	American	Chile S. Co., Inc	411.1	54.1	25.0	Antofagasta, Chile	Chesapeake, Pa.	Gasoline	5,055	6,069
Pont Sur.	2	2	00	2	7	11	2	14	50	American	Swayne & Hoyt	324.0	46.2	22.0	Portland, Oreg.	New Orleans, La.	Lumber, general	3,110	3,984
Nevedan	1	18	30	2	7	29	2	15	40	American	Amer.-Hawian Line	400.0	57.8	23.0	Seattle, Wash.	Boston, Mass.	General	5,721	6,829
Portmar	2	8	15	2	8	15	2	16	35	American	Calmar S. S. Corp.	469.0	54.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,283	6,431
Porta-Barbara ¹¹	2	8	35	2	11	08	2	18	00	American	Calmar S. S. Corp.	469.0	54.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,283	6,431
Porta-Barbara ¹¹	2	8	35	2	11	08	2	18	00	American	Calmar S. S. Corp.	469.0	54.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,283	6,431

PORT OF CRISTOBAL.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 27.....	Pastores.....	United Fruit Co.	Port Limon, C. R.	July 27.....	No. 9855 ²⁵	Pan American Airways.....	San Salvador and waypts.
July 27.....	Iriona.....	United Fruit Co.	Puerto Colombia.	July 27.....	No. 945-M ²⁵	Pan American Airways.....	Talara via wayports.
July 27.....	Daytonian.....	Leyland S. S. Line.	Liverpool via wayports.	July 27.....	No. 9137 ²⁵	Pan American Airways.....	Miami via wayports.
July 27.....	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.	July 27.....	Teutonia.....	Hamburg-American Line.....	Cartagena, Colombia.
July 28.....	Ulua.....	United Fruit Co.	New York via Habana.	July 27.....	Pastores.....	United Fruit Co.	New York via Habana.
July 28.....	Cundinamarca-C-33 ²⁵	Seadta Airplane Co.	Barranquilla and waypts.	July 27.....	Heredia.....	United Fruit Co.	New Orleans and waypts.
July 28.....	No. 9670 ²⁵	Pan American Airways.....	San Salvador and waypts.	July 27.....	Iriona.....	United Fruit Co.	Colon, R. P.
July 28.....	Banan.....	United Fruit Co.	Kingston, Jamaica.	July 28.....	Daytonian.....	United Fruit Co.	Port Limon, C. R.
July 29.....	No. 945-M ²⁵	Pan American Airways.....	Talara via wayports.	July 29.....	Atlantida.....	Leyland S. S. Line.....	Centugetes, Cuba.
July 29.....	Venezuela.....	Royal Netherlands S. S. Co.	Amsterdam via waypts.	July 29.....	Banan.....	United Fruit Co.	Bocas, R. P.
July 30.....	Carare.....	Elders & Fyffes Line.....	Amsterdam via waypts.	July 29.....	No. 9664 ²⁵	Pan American Airways.....	San Salvador and waypts.
July 30.....	Galicia.....	Hamburg-American Line.....	Hamburg via waypts.	July 30.....	No. 9776 ²⁵	Pan American Airways.....	Miami via wayports.
July 30.....	Castilla.....	United Fruit Co.	New Orleans, La.	July 30.....	Ulua.....	United Fruit Co.	Port Limon, C. R.
July 30.....	Sixola.....	United Fruit Co.	New York via Kingston.	July 30.....	Venezuela.....	United Fruit Co.	Port Limon, C. R.
July 30.....	Pearl Marie ²⁶	G. I. Bryan.....	Colon, R. P.	July 30.....	Carare.....	Royal Netherlands S. S. Co.	Avonmouth via wayports.
July 30.....	No. 142-M ²⁵	Pan American Airways.....	Miami via wayports.	July 30.....	Pearl Marie ²⁶	Elders & Fyffes Line.....	Bluefields, Nicaragua.
July 30.....	No. 9685 ²⁵	Pan American Airways.....	San Salvador via waypts.	July 31.....	Inapaquina ²⁴	G. I. Bryan.....	Colon, R. P.
July 31.....	Inapaquina ²⁴	A. Tagaropolos.....	Colon, R. P.	July 31.....	Anachucuna ²⁴	A. Tagaropolos.....	Colon, R. P.
July 31.....	Anachucuna ²⁴	United Fruit Co.	Colon, R. P.	July 31.....	Anneta I. ²⁴	United Fruit Co.	Colon, R. P.
July 31.....	Finn.....	Aluminiu Line.....	Colon, R. P.	July 31.....	No. 309-N ²⁵	Pan American Airways.....	Pto. Cabello and wayports.
July 31.....	Cristobal.....	Panama R. R. S. S. Line.....	New Orleans and waypts.	July 31.....	No. 300-N ²⁵	Pan American Airways.....	Talara via wayports.
July 31.....	Bolivar.....	Colombian S. S. Line.....	New York via wayports.	July 31.....	Galicia.....	Hamburg-American Line.....	Port Limon, C. R.
August 1.....	Atlantida.....	Standard Fruit & S. S. Co.	New Orleans and Habana.	July 31.....	Finn.....	Aluminiu Line.....	Cartagena, Colombia.
August 1.....	Iriona.....	United Fruit Co.	Port Limon, C. R.	July 31.....	Sixola.....	United Fruit Co.	New York via wayports.
August 1.....	Venezuela.....	Royal Netherlands S. S. Co.	Pto. Cabello and wayports.	August 1.....	Castilla.....	United Fruit Co.	Cartagena, Colombia.
August 2.....	No. 309-N ²⁵	Pan American Airways.....	Miami via wayports.	August 1.....	Cundinamarca-C-33 ²⁵	Pan American Airways.....	San Salvador and waypts.
August 2.....	No. 9776 ²⁵	Pan American Airways.....	New Orleans via Habana.	August 1.....	Bolivar.....	Seadta Airplane Co.	Barranquilla and waypts.
August 2.....	Cartago.....	United Fruit Co.	Colon, R. P.	August 2.....	Dora K. ²⁷	Colombian S. S. Line.....	New York via Kingston.
August 2.....	A. L. Surgeon.....	Diez & Garcia.....	Colon, R. P.	August 2.....	Escupe Fuego ²⁶	A. L. Surgeon.....	Bluefields and Port Limon.
August 2.....	Nueva Espana ²⁴	Diez & Garcia.....	Colon, R. P.	August 2.....	Nueva Espana ²⁴	Diez & Garcia.....	Bluefields, Nicaragua.
.....	.....	.....	.....	August 2.....	Iriona.....	Standard Fruit & S. S. Co.	Colon, R. P.
.....	.....	.....	.....	August 2.....	Atlantida.....	Standard Fruit & S. S. Co.	New Orleans and waypts.
.....	.....	.....	.....	August 2.....	Venezuela.....	Royal Netherlands S. S. Co.	Amsterdam and wayports.

* ARRIVALS.

* DEPARTURES.

* DEPARTURES.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 28.....	Elg ²⁸	Thorwald Hansen.....	Puntarenas, C. R.	July 28.....	Elg ²⁸	Thorwald Hansen.....	Arica, Chile.
July 30.....	Sambu ²⁹	Hans Elliot.....	Panama Bay, R. P.	July 30.....	Sambu ²⁹	Hans Elliot.....	Panama Bay, R. P.
July 30.....	Real ²⁹	Hans Elliot.....	Panama Bay, R. P.	July 31.....	Real ²⁹	Hans Elliot.....	Panama Bay, R. P.

* Other than ships passing through the Canal.

* Other than ships passing through the Canal.

Net Tonnage of Vessels Transiting the Panama Canal during the Fiscal Year 1930.

During the fiscal year ended June 30, 1930, there were 6,185 transits of the Panama Canal by commercial vessels, including 19 of foreign naval vessels paying tolls on the basis of displacement tonnage, and 6,166 of merchant vessels, yachts, etc. Fifty-three and three-tenths per cent of the 6,166 commercial transits on which tolls were levied on net tonnage were by vessels of from 4,000 to 6,000 net tons, Panama Canal measurement, 5.8 per cent by vessels under 1,000 net tons, and 5.6 per cent by vessels over 8,000 net tons; the latter included 102 transits by vessels of over 10,000 net tons, as compared with 86 such transits during the fiscal year 1929. The average tonnage of all transits was 4,862 net tons as compared with 4,666 net tons for the preceding fiscal year, an increase of 196 tons, or 4.2 per cent.

Vessels of Italian registry averaged the highest net tonnage, 6,501, with those of Danzig second, 6,150 net tons, and British ships third, averaging 5,244 net tons. The lowest recorded average by nationality was for Nicaragua, one transit of a vessel of 140 tons, the next lowest 176 net tons for 74 transits of Colombian vessels, the third, 331 for 2 transits of a Costa Rican vessel.

The German liner *Columbus* of 20,079 net tons, Panama Canal measurement, was the largest commercial vessel transiting during the year.

The following tabulation shows the 6,166 commercial transits in groups according to net tonnage, Panama Canal measurement, segregated by nationality, together with the average tonnages and the per cent which the total of each group formed of the total number of transits for the fiscal years 1930 and 1929:

Nationality.	Number of transits in net tonnage groups.													Panama Canal net tonnage.	Average Panama Canal net tonnage.	
	20 to 99, inclusive.	100 to 999, inclusive.	1,000 to 1,999, inclusive.	2,000 to 2,999, inclusive.	3,000 to 3,999, inclusive.	4,000 to 4,999, inclusive.	5,000 to 5,999, inclusive.	6,000 to 6,999, inclusive.	7,000 to 7,999, inclusive.	8,000 to 8,999, inclusive.	9,000 to 9,999, inclusive.	10,000 and over.	Total.		Fiscal year 1930.	Fiscal year 1929.
Argentine.....					1	12							1	3,816	3,816	.....
Belgian.....				1	12	5		4	1				23	119,499	5,196	5,276
British.....	13	52	69	13	171	518	215	207	99	78	54	38	1,527	8,006,962	5,244	5,070
Chilean.....	2	1	1	2	10	27							43	164,152	3,817	4,353
Colombian.....		74											74	13,026	176	386
Costa Rican.....		2											2	662	331	39
Danish.....		7	2	18	9	16	34	4	1				91	381,766	4,195	4,129
Danzig.....							17	17	2				36	221,382	6,150	6,247
Dutch.....		37			6	13	17	39	24	5			141	671,250	4,761	4,635
Finnish.....			1	1									2	3,810	1,905	2,331
French.....					4	62	43	4	11				124	627,760	5,063	4,772
German.....		73	60	7	26	64	70	60	14			2	376	1,433,074	3,811	3,496
Greek.....				1	7	14							22	89,221	4,056	3,904
Italian.....				3	4	9	1	26	8		15		66	429,091	6,501	5,933
Japanese.....	1	4				79	69		6				159	803,182	5,051	5,000
Mexican.....				1									1	2,159	2,159	.....
Nicaraguan.....			1										1	140	140	.....
Norwegian.....	10	13	18	8	57	120	102	30	9			4	371	1,660,101	4,475	3,765
Panamanian.....	35	7	2	5		4		6	1				60	87,826	1,464	2,406
Peruvian.....					1		1						2	8,959	4,480	2,372
Spanish.....					1								1	4,209	4,209	3,791
Swedish.....		4	8		16	60	32	10					125	571,535	4,572	4,296
United States.....	10	20	108	377	88	896	768	400	72	55	33	58	2,885	14,634,495	5,038	4,935
Yugoslav.....					10	18	5						33	142,537	4,319	4,198
Total.....	70	292	268	437	422	1,906	1,378	804	247	138	102	102	6,166	29,980,614	4,862	4,666
Per cent of total, fiscal year 1930...	1.1	4.7	4.4	7.1	6.8	31.0	22.3	13.0	4.0	2.2	1.7	1.7	100.0	.....	.....	.....
Fiscal year 1929.....	0.6	5.8	4.5	7.9	7.3	34.2	20.0	11.6	3.4	1.8	1.5	1.4	100.0	.....	.....	.....

Panama Canal Records.

A statement of various records made by traffic through the Panama Canal at different times was published in THE PANAMA CANAL RECORD of March 26, 1930. Since that time new records have been established with respect to several items, viz., vessel of greatest length; vessel of greatest registered gross, registered net, and Panama Canal net tonnage; largest cargo carried on any ship passing through the Canal; greatest amount of cargo passing through the Canal in one day's traffic; and, with respect to one day's commercial traffic in one direction, largest Panama Canal net tonnage, tolls and cargo. A revised statement of the various records to date is presented below.

In the tabulation directly following, data are shown separately for merchant or commercial vessels and for naval vessels because they are different types of craft:

MERCHANT OR COMMERCIAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	778.0 feet.....	Columbus.....	May 3, 1930.
Beam.....	83.2 feet.....	Malolo.....	November 2, 1927.
Draft.....	36 feet.....	Chilore.....	March 25, 1928.
Tonnage:			
Registered gross.....	32,565 tons.....	Columbus.....	May 3, 1930.
Registered net.....	15,988 tons.....	Columbus.....	May 3, 1930.
Panama Canal net.....	20,079 tons.....	Columbus.....	May 3, 1930.
United States net.....	13,769 tons.....	Empress of Scotland.....	April 2, 1926.
Tolls.....	\$17,211.25.....	Empress of Scotland.....	April 2, 1926.
Cargo.....	23,000 tons crude oil.	C. O. Stillman.....	July 20, 1930.

NOTE.—The *Empress of Scotland* has made one transit since April 2, 1926.

NAVAL VESSELS.

Feature.	Record.	Vessel.	Date of transit.
Length.....	888 feet.....	U. S. S. Saratoga.....	February 5, 1928.
Beam.....	107.9 feet.....	U. S. S. Saratoga.....	February 5, 1928.
Draft.....	33 feet 1 inch.....	U. S. S. Colorado.....	March 19, 1926.
Tonnage.....	44,799 tons displacement.	H. M. S. Hood.....	July 23 and 24, 1924.
Tolls.....	\$22,399.50.....	H. M. S. Hood.....	July 23 and 24, 1924.

NOTE.—The U. S. S. *Lexington*, a sister ship of the U. S. S. *Saratoga*, transited on March 25, 1928; both of these vessels transited also in 1930.

In the following data the term "commercial traffic" includes all craft subject to payment of tolls except small vessels under 20 net tons, Panama Canal measurement. It does not include vessels in the public service of the Governments of the United States, Panama, and Colombia, and ships which transit the Canal solely for the purpose of having repairs made at the Balboa shops and dry-dock, as such vessels are exempt from payment of tolls.

Largest year's commercial traffic:

Number of transits, 6,456, fiscal year 1928.
Panama Canal net tonnage, 30,353,189, calendar year 1929.
Tolls, \$27,592,715.84, calendar year 1929.
Cargo, 31,450,493, calendar year 1929.

Largest month's commercial traffic:

Number of transits, 603, January, 1929.
Panama Canal net tonnage, 2,771,280, January, 1929.
Tolls, \$2,502,815.12, January, 1929.
Cargo, 2,858,835 tons, January, 1929.

Largest day's commercial traffic:

Number of transits, 33, October 1, 1927.

Panama Canal net tonnage, 152,610, November 15, 1927.

Tolls, \$137,053.98, April 10, 1928.

Cargo, 174,247 tons, April 22, 1930.

Largest day's commercial traffic in one direction:

Number of transits, 22, Atlantic to Pacific, December 8, 1928.

Panama Canal net tonnage, 116,618, Pacific to Atlantic, April 22, 1930.

Tolls, \$104,687.50, Pacific to Atlantic, April 22, 1930.

Cargo, 149,894 tons, Pacific to Atlantic, April 22, 1930.

Largest number of transits in any one day:

Thirty-five Government and 22 commercial vessels, a total of 57 vessels, January 17, 1924.

Smallest day's commercial traffic occurred on November 18, 1924, on which the number of transits was 2; Panama Canal net tonnage, 2,870; tolls, \$2,865; and cargo, 2,809 tons.

The lowest pro rata cost of tolls per ton of cargo carried through the Canal on a commercial vessel is \$0.2103 per ton, which occurred with the transit of the Swedish motor ship *Svealand*, on January 2, 1930, carrying a cargo of iron ore from Cruz Grande, Chile, to Sparrows Point, Md. On this transit the *Svealand* carried 22,244 tons of cargo and paid tolls of \$4,678.75.

The fastest transit through the Canal, in 4 hours and 10 minutes, was made by the United States destroyer *Lawrence*, Atlantic to Pacific, on December 2, 1917.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 26, 1930.

No. 727.

AID TO NAVIGATION.

The Panama Canal, Atlantic entrance, beacon replaced.—Beacon No. 5, a fixed white light on the east side of the channel, Atlantic entrance of the Panama Canal, which was temporarily discontinued June 13, 1930, was reestablished July 25, 1930. (See Notice to Mariners No. 716, June 16, 1930).

Approximate position: Latitude 9° 20' 25" N., longitude 79° 55' 15" W.

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 6, 1930.

No. 730.

Colombia, Cartagena approach; information on Salmedina Bank light vessel.—The following is quoted from "Daily Memorandum" for July 29, 1930, published by the Hydrographic Office, U. S. Navy:

The master of the Canadian steamship *Beacon Street*, reports that from reliable compass bearings he found Salmedina Bank light vessel to be located one-half mile, 140°, from its present charted position.

Approximate position: Latitude 10° 23' 10" N., longitude 75° 38' 42" W.

H. BURGESS,
Governor.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Comparison of Canal Traffic in July, 1930, with July Traffic in Previous Years.

The traffic through the Panama Canal during the month of July, 1930, showed an increase as compared with the preceding month, and a decrease as compared with July, 1929.

The 488 transits in July this year are fewer by 39, or 7.4 per cent, than the 527 transits in the corresponding month a year ago, while the net tonnage, Panama Canal measurement, aggregating 2,438,895 tons, is less by 29,385 tons, or 1.2 per cent, than the total of 2,468,280 tons in July, 1929. The cargo tonnage of 2,402,047 tons for July, 1930, shows a decline of 196,115 tons, or 7.5 per cent, from the total of 2,598,162 tons passing through the Canal in July, 1929.

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of July each year from 1915 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of July.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914 ¹				1915	² 102	² 331,197	² 465,567
1915	166	542,676	715,253	1916	63	199,687	237,813
1916	145	482,202	624,061	1917	150	433,213	588,213
1917	181	557,411	664,924	1918	172	517,839	627,669
1918	169	497,489	584,998	1919	169	519,416	576,385
1919	158	519,898	568,172	1920	206	712,170	781,203
1920	225	856,798	886,814	1921	241	951,323	966,001
1921	206	810,613	708,982	1922	223	951,455	907,075
1922	251	1,127,871	1,211,100	1923	331	1,550,482	1,639,656
1923	474	2,310,027	2,337,784	1924	436	2,179,073	2,249,559
1924	422	2,036,097	2,037,154	1925	389	1,904,593	1,996,570
1925	418	1,951,295	1,960,654	1926	433	2,064,549	2,169,787
1926	456	2,154,821	2,185,627	1927	456	2,185,651	2,312,351
1927	509	2,496,955	2,450,463	1928	533	2,454,836	2,469,226
1928	509	2,318,395	2,291,955	1929	534	2,468,433	2,555,250
1929	527	2,468,280	2,598,162	1930	515	2,493,385	2,502,519
1930	488	2,438,895	2,402,047	.....	³ 496	³ 2,453,086	³ 2,402,199

¹ Canal opened August 15, 1914.

² Average for 12 months of fiscal year ended June 30, 1915.

³ First 7 months of calendar year 1930.

Tanker Traffic Through the Panama Canal in July, 1930.

During the month of July, 1930, 120 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 656,757, on which tolls of \$588,395.10 were paid. Cargo amounted to 688,237 tons, which included 681,937 tons of mineral oil and 6,300 tons of coconut oil. In point of net tonnage, tanker traffic increased 12.1 per cent as compared with the same traffic for the corresponding month a year ago, while cargo tonnage increased 42.7 per cent.

Tanker traffic comprised 24.6 per cent of the total commercial transits through the Canal during the month; made up 26.9 per cent of the total Panama Canal net tonnage; were the source of 27.0 per cent of the tolls collected; and carried 28.7 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of July, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for July, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	45,888	\$33,101.52	.....
Danish.....	3	14,156	10,194.43	.....
Danzig.....	1	6,127	4,411.44	.....
Dutch.....	1	4,317	3,103.24	.....
French.....	1	5,335	3,877.20	.....
German.....	1	4,435	3,193.20	.....
Italian.....	1	4,320	3,110.40	.....
Norwegian.....	5	26,334	18,961.48	.....
United States.....	29	170,725	123,932.14	.....
Total, July, 1930.....	51	231,690	202,949.10	.....
Total, June, 1930.....	65	345,896	256,991.09	27,972
Total, May, 1930.....	48	272,155	202,856.35	33,923
Total, July, 1929.....	60	323,512	237,677.21	19,064
<i>Pacific to Atlantic.</i>				
Belgian.....	1	5,410	6,186.25	9,517
British.....	14	69,944	71,257.50	133,002
Danzig.....	2	11,990	13,003.75	23,498
French.....	3	14,318	15,462.50	25,376
Norwegian.....	5	24,895	26,615.00	47,479
Panamanian.....	1	6,450	7,062.50	12,817
Swedish.....	1	6,235	6,486.25	12,132
United States.....	42	235,835	236,372.25	424,506
Total, July, 1930.....	69	375,967	385,446.00	688,237
Total, June, 1930.....	44	245,517	251,649.15	432,961
Total, May, 1930.....	44	236,762	242,891.54	422,174
Total, July, 1929.....	51	262,465	267,964.88	462,463

* Includes 6,300 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during July, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	161,087	\$115,982.64	.....
United States to South America.....	2	7,652	5,509.44	.....
Canada to United States.....	1	3,913	2,887.50	.....
Canada to South America.....	2	12,989	9,352.08	.....
South America to United States.....	1	2,081	1,498.32	.....
Cristobal to United States.....	1	5,725	4,122.00	.....
Europe to United States.....	16	82,116	59,185.68	.....
Europe to South America.....	1	6,127	4,411.44	.....

PACIFIC TO ATLANTIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	39	217,227	\$217,404.75	389,841
United States to Cristobal.....	1	5,725	6,346.25	13,000
United States to West Indies.....	4	22,138	23,007.50	40,630
United States to Europe.....	18	88,455	94,723.75	161,835
South America to United States.....	3	17,537	19,132.50	37,004
South America to Canada.....	2	13,774	14,483.75	28,299
South America to Europe.....	1	5,927	6,508.75	11,308
Philippine Islands to United States.....	1	4,284	3,838.75	4,300

* Coconut oil.

Of the tanker traffic passing through the Canal in July, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for July, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
July, 1930.....	45	248,934	\$179,400.78	.....
June, 1930.....	56	309,724	219,434.66	9,782
May, 1930.....	33	190,213	139,975.35	14,359
July, 1929.....	46	249,097	184,093.41	19,961
<i>From Los Angeles.</i>				
July, 1930.....	56	302,142	307,081.25	545,893
June, 1930.....	33	189,892	191,944.40	330,780
May, 1930.....	32	173,014	177,384.65	311,898
July, 1929.....	36	190,039	194,293.90	347,537

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 2, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Chateau Thierry.....	U. S. Government.....	July 19.....	July 22.....	560	10
St. Michel.....	U. S. Government.....	July 22.....	July 22.....	240	.....
Kenowis.....	U. S. Government.....	July 23.....	July 24.....	1,125	106
Cambrail.....	U. S. Government.....	July 24.....	July 25.....	13	6
La Perla.....	United Fruit Co.....	July 25.....	July 26.....	714	49
Murla.....	Roland Line.....	July 25.....	July 26.....	53	147
Cauca.....	National Navigation Co.....	July 25.....	July 26.....	.....	249
Abraham Lincoln.....	Fred Olsen & Co.....	July 28.....	July 29.....	1,194	1
Venezuela.....	Panama Mail S. S. Co.....	July 29.....	July 30.....	21	18
Caldas.....	National Navigation Co.....	July 29.....	July 29.....	.....	82
El Salvador.....	Panama Mail S. S. Co.....	July 30.....	July 31.....	254	.....
Santa Elisa.....	Graces Line.....	July 30.....	July 30.....	70	183
Henderson.....	U. S. Government.....	July 31.....	August 1.....	2	.....

Names of Streets and Roads.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 30, 1930.

To all concerned:

The following names are given to the streets and roads in the Canal Zone hereinafter described:

ANCON-BALBOA.

The intersection of Gorgas Road, Heights Road, and Lion Hill Road in Ancon, is designated Cashew Place.

The new street south of Plank Street intersecting Gavilan Road at right angles at the cable office in Balboa, extending westward, is designated Akee Street.

The new street south of Akee Street, intersecting Gavilan Road, extending westward and paralleling Akee Street, is designated Almond Street.

The new street intersecting Akee and Almond Streets, running north and south paralleling Gavilan Road, is designated Calabash Street.

The new street intersecting Amador Road at the northern boundary of Balboa Radion Station reservation and extending eastward, is designated Banyan Street.

The new street intersecting Amador Road just north of Banyan Street and extending eastward is designated Bamboo Street.

The new street running north and south, intersecting Banyan and Bamboo Streets, paralleling Amador Road, is designated Bougainvillea Street.

CRISTOBAL.

The street extending eastward from Bolivar Highway on the north side of the Commissary Cold Storage Plant, and intersecting Guava Road, is designated Whitlock Street, in honor of Major F. O. Whitlock, formerly Subsistence Officer, Isthmian Canal Commission.

The street extending eastward from Bolivar Highway on the south side of the Commissary Cold Storage Plant, and northward to Whitlock

Street, is designated Wilson Street, in honor of Colonel E. T. Wilson, formerly Subsistence Officer Isthmian Canal Commission.

H. BURGESS,
Governor.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is applied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 7, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.23
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Coiza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.46
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 13, 1930. No. 2.

Sale of Diesel Oil at Cristobal by Union Oil Company of California.

The Union Oil Company of California, has rented tanks Nos. 151 and 152, each of 42,000 barrels capacity, at the Mount Hope oil handling plant from The Panama Canal, and stocked them with Diesel oil for sale to shipping and other interests. Oil was delivered into the tanks from the company's tanker *Santa Maria*, which transited the Canal on July 28th, bound from Los Angeles to Cristobal. The company now sells both fuel and Diesel oil at both terminals, and is the first private company to handle Diesel oil at the Atlantic end of the Canal, though The Panama Canal has maintained a tank of Diesel oil there since 1923. The Panama Canal has sold its stock of Diesel oil at Cristobal to the Union Oil Company and, for the present, withdrawn from selling Diesel oil at either terminal. It continues to maintain stocks of fuel oil at both terminals.

The Union Oil Company of California, is the original supplier of fuel oil on the Isthmus. In January, 1905, the company broached the matter of securing permission to build a pipeline across the Isthmus, and stated that it was primarily for the purpose of transferring oil from tankers in the Pacific to tankers on the Atlantic side for delivery to the eastern seaboard of the United States and Europe. A revocable license covering construction and operation of such pipeline and appurtenances was signed by the President of the United States on January 10, 1906, and the laying of pipe began in March, 1906. Oil was first supplied to the Isthmian Canal Commission in March, 1907, and on November 14, 1907, the pipeline across the Isthmus was in complete operation. The transfer of oil between tankers, similar to the transfer of cargo between ships by shipment over the Panama Railroad, never developed extensively, and supplying the Canal organization with oil became the main feature of the company's business on the Isthmus; so much so that in 1909 it threatened to remove its plant and line if that business could not be had on more favorable terms. With several revisions of contracts the company continued to supply oil to the Canal and Railroad until the end of the year 1914. On December 31, 1914, the revocable license under which the company had been operating its pipeline across the Isthmus was terminated, and in 1915 the line was removed. The Panama Canal laid a line from Balboa to Paraiso, reaching thus the dredging equipment in Gaillard Cut and all of the more important distribution points along the Pacific section of the Canal.

Postal Address of the Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, August 9, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ionie.....	2	15.40	3	6.13	3	13.07	3	14.27	British.....	White Star Line.....	500.3	63.3	29.2	General.....	7,000	12,872	9,577
Malayan Prince.....	2	23.50	3	6.35	3	13.12	3	14.27	British.....	Princo Line, Ltd.....	441.6	60.0	20.6	General.....	2,155	9,209	6,245
Buenos Aires Maru.....	3	8.55	3	7.30	3	13.55	3	15.08	Japanese.....	Osaka Shosen Kaisha.....	461.3	62.0	24.6	General.....	4,315	10,446	7,631
Defiance.....	3	5.35	3	7.40	3	14.20	3	15.27	American.....	Rossvit S. Co., S. B.....	456.1	56.0	24.5	Cargo oil, general.....	5,853	8,313	5,991
Cerigo.....	28	17.40	3	8.55	3	15.30	3	17.18	German.....	Hamburg-American Line.....	227.0	34.0	13.7	General.....	214	1,572	1,011
Australien.....	3	3.10	3	14.55	3	21.35	3	22.40	Danish.....	East Asiatic Co.....	410.0	55.2	20.7	Coke, iron, genl.....	4,658	7,031	5,353
Birmingham City.....	3	21.05	3	21.15	4	9.34	4	11.38	American.....	Isthmian S. S. Lines.....	395.0	55.0	23.0	Steel, general.....	6,158	7,304	5,188
Malang.....	4	2.20	4	6.20	4	13.18	4	14.30	American.....	Mallory Transp. Line.....	344.8	50.1	24.6	Sliphur.....	5,012	4,330	3,019
Solana.....	4	5.00	4	6.25	4	13.39	4	14.30	American.....	Tidewater Oil Co.....	419.5	56.5	19.0	Balist.....	6,860	7,060	5,025
Tsuyama Maru.....	4	6.45	4	7.35	4	14.33	4	16.00	Japanese.....	Nippon Yusen Kaisha.....	445.0	58.0	23.6	Balist.....	6,860	7,356	5,681
S-14.....	4	8.20	4	8.20	4	16.22	5	11.22	American.....	U. S. Navy.....	231.0	21.10	.....	Balist.....	.....	.....	.....
S-16.....	4	8.20	4	8.20	4	16.22	5	11.22	American.....	U. S. Navy.....	231.0	21.10	.....	Balist.....	.....	.....	.....
S-15.....	4	8.30	4	8.30	4	16.28	5	11.22	American.....	U. S. Navy.....	231.0	21.10	.....	Balist.....	.....	.....	.....
S-17.....	4	8.30	4	8.30	4	16.28	5	11.22	American.....	U. S. Navy.....	231.0	21.10	.....	Balist.....	.....	.....	.....
Moveria.....	4	11.05	4	11.15	4	17.44	4	21.08	British.....	Donaldson Brothers.....	385.0	51.0	18.2	General.....	929	6,576	4,724
Paul.....	4	11.10	4	12.05	4	18.45	4	19.25	American.....	Luckenbach Line.....	471.0	59.6	22.11	General.....	5,312	9,627	6,539
Charles Nelson.....	4	11.30	4	13.30	4	20.30	4	22.50	American.....	Nelson Line.....	380.4	53.1	18.0	General.....	2,450	5,659	4,138
Baralt.....	1	19.20	4	14.55	4	21.12	4	23.44	Dutch.....	Royal Neder. S. S. Co.....	202.0	33.1	11.0	General.....	60	1,453	792
Los Angeles.....	2	20.45	4	14.50	4	21.49	5	00.20	German.....	Hamburg-American Line.....	432.0	59.0	29.4	General.....	4,446	8,454	6,344
Calgarotte.....	4	14.40	4	15.40	4	22.23	5	17.50	British.....	Imperial Oil Co.....	521.5	70.4	20.0	Balist.....	12,359	7,717	7,717
Launch, Navy.....	4	6.35	5	6.05	5	13.08	5	21.44	American.....	U. S. Navy.....	416.6	58.3	20.3	Balist.....	3,664	7,320	5,980
Barneveld.....	4	21.10	5	6.25	5	14.03	5	15.00	Dutch.....	Royal Neder. S. S. Co.....	396.2	55.1	20.0	General.....	.....	.....	.....
Erna.....	4	15.05	5	6.25	5	14.03	5	15.00	Norwegian.....	Anglo-Mexican Pet. Co.....	243.0	36.0	19.0	Balist.....	.....	.....	.....
Niagara.....	4	15.05	5	7.20	5	14.09	5	16.05	American.....	Huasteca Petroleum Co.....	429.0	59.2	21.6	Balist.....	7,886	5,563	5,563
I. C. White.....	5	4.15	5	7.25	5	14.58	5	16.05	American.....	Federal Steam Nav. Co.....	460.0	62.0	25.0	Balist.....	9,130	10,550	7,963
Somerset.....	5	4.55	5	8.25	5	15.30	5	20.00	British.....	Williams S. S. Line.....	415.0	56.0	15.0	General.....	1,418	7,750	5,905
Willkeno.....	5	8.30	5	9.30	5	16.57	5	18.00	American.....	Sun Oil Co.....	480.0	66.0	21.0	General.....	9,607	6,561	6,561
Eastern Sun.....	5	18.45	5	18.50	6	10.35	6	10.35	American.....	San Diego, Calif.....	434.3	57.8	18.0	Balist.....	2,243	7,983	5,912
2304-S.....	5	18.45	5	18.50	6	10.35	6	10.35	American.....	L. H. Baker.....	434.3	57.8	18.0	Balist.....	.....	.....	.....
Georgian.....	6	00.50	6	6.15	6	14.24	6	15.30	American.....	Amer-Hawaiian Line.....	434.3	57.8	18.0	General.....	.....	.....	.....
S-12.....	6	00.50	6	6.15	6	14.24	6	15.30	American.....	U. S. Navy.....	434.3	57.8	18.0	General.....	.....	.....	.....
Jane.....	6	7.50	6	8.25	6	15.21	6	16.15	American.....	Arrow Line.....	409.5	54.2	21.6	General.....	4,772	6,615	4,906
Christenson.....	5	14.35	6	8.50	6	15.46	6	16.45	German.....	North German Lloyd.....	393.1	54.1	19.0	General.....	2,678	6,573	4,629
Wiegand.....	5	14.35	6	8.50	6	15.46	6	16.45	German.....	North German Lloyd.....	393.1	54.1	19.0	General.....	.....	.....	.....

* Wire rods, phosphate, etc.

* Launch.

* Survey ship.

* Submarine.

* Motor ship.

* Tanker.

San Felipe.....	6	7	05	6	9	30	6	16	43	6	17	45	American.....	States S. S. Co.....	409	0	54	2	18	0	Philadelphia, Pa.....	Seattle, Wash.....	Steel, paper, gen.	3,427	6,821	4,927
Lena.....	6	7	55	6	10	00	6	17	16	6	18	15	American.....	Luckenbach Line.....	425	0	53	7	21	0	Seattle, Wash.....	General	3,708	7,217	5,295	
Steelers.....	6	5	00	6	10	55	6	18	39	6	19	40	American.....	Ore S. S. Corp.....	550	3	57	9	21	4	Cruz Grande, Chile.....	Ballast	15,551	4,297		
Washington.....	6	12	02	6	12	10	6	19	22	7	20	45	American.....	The Texas Co.....	423	8	57	0	20	0	Los Angeles, Calif.....	General	1,369	10,626	6,680	
Santa Maria.....	6	10	45	6	13	00	7	1	05	7	1	05	American.....	Grace Line.....	466	7	70	0	23	4	Valparaiso, Chile.....	General	1,369	10,626	6,680	
Australia.....	6	15	10	6	15	20	6	22	20	6	23	30	American.....	The Texas Co.....	509	7	70	3	26	0	Los Angeles, Calif.....	Ballast	12,514	8,427		
Rochester.....	6	4	55	7	6	05	7	13	09	7	13	09	American.....	U. S. Navy.....	380	0	64	0			Balboa, C. Z.....	Ballast	1,680			
Vega.....	7	7	15	7	5	55	7	20	50	7	20	50	American.....	U. S. Navy.....	390	0	64	0	18	3	Mare Island, Calif.....	Navy stores	1,680			
Tai Yang.....	6	22	20	7	7	10	7	13	57	7	15	05	Norwegian.....	Barber-Whitteman Line.....	461	0	53	4	21	6	Hongkong, China.....	General	3,074	10,009	7,075	
Henry D.....	7	00	25	7	8	15	7	15	28	7	16	40	American.....	Texas Gulf Sulphur Co.....	356	0	51	6	25	3	Tacoma, Wash.....	Sulphur	6,450	5,367	2,900	
Whiton.....	7	9	20	7	9	50	7	15	33	7	17	00	American.....	Transatlantic S. S. Co.....	448	0	57	0	20	0	Sydney, Australia.....	Coal, general	4,479	8,279	6,199	
Parrakola.....	7	16	20	7	16	30	8	11	24	8	11	24	British.....	Lawther, Latta & Co.....	426	0	59	5	24	3	Vancouver, B. C.....	Salt.....	1,800	7,130	5,322	
Anglo-Indian.....	7	18	15	8	6	20	8	13	12	8	14	30	British.....	Pacific Steam Nav. Co.....	215	7	33	5	16	7	Champeron, Guat.....	General	1,025	11,273	7,066	
Acapulco.....	7	18	08	8	6	10	8	13	35	10	8	00	British.....	Shaw, Savill & Albion.....	482	0	64	0	23	0	Lyttelton, N. Z.....	General	4,032	11,006	8,520	
Taranski.....	8	6	00	8	7	20	8	14	16	9	00	45	American.....	Panama-Pacific Line.....	584	6	80	3	26	0	New York, N. Y.....	General	2,904	25,254	18,170	
City of.....	7	22	55	8	7	30	8	14	55	8	16	00	British.....	Ellerman & Bucknall.....	443	0	57	9	24	0	Baltimore, Md.....	General	1,760	8,855	6,858	
Steel Scientist.....	7	23	05	8	8	18	8	15	20	8	16	35	American.....	Isthmian S. S. Lines.....	424	2	56	2	25	6	Philadelphia, Pa.....	General	6,438	7,611	5,454	
Dio.....	7	23	50	8	8	25	8	16	24	8	18	40	American.....	Rodwood Line.....	381	0	52	0	22	10	New Orleans, La.....	(s)	4,022	5,708	4,137	
Mundies.....	8	3	50	8	9	25	8	17	27	8	18	40	American.....	Munson S. S. Line.....	370	0	53	0	19	0	Seattle, Wash.....	General	4,100	5,525	4,157	
F. H. Hillman.....	8	11	55	8	12	05	8	19	41	9	2	15	American.....	Vacuum Oil Co.....	500	0	68	2	25	0	Los Angeles, Calif.....	Ballast	11,223	7,913		
Nosa Queen.....	7	18	15	8	15	00	8	22	00	9	15	15	American.....	N. O. & S. A. S. S. Co.....	324	0	46	0	21	2	Tacahuano, Chile.....	General	2,550	11,223	7,913	
H. M. Storey.....	8	18	45	8	19	20	9	12	08	9	13	20	American.....	Standard Oil Co.....	500	0	68	0	18	0	Los Angeles, Calif.....	Ballast	11,223	7,913		
C. O. Skillman.....	9	00	10	9	6	25	9	14	17	9	15	30	British.....	International Pet. Co.....	422	0	53	9	13	0	Los Angeles, Calif.....	Ballast	11,223	7,913		
Yngaren.....	9	2	10	9	6	30	9	15	21	9	16	25	Swedish.....	Transatlantic S. S. Co.....	565	0	75	6	27	6	Los Angeles, Calif.....	Ballast	11,223	7,913		
Santa Cecilia.....	9	4	00	9	7	20	9	16	57	9	19	10	American.....	Nautilus S. S. Co.....	404	6	54	0	23	9	Portland, Ore.....	Steel, general	5,937	6,745	4,362	
Pacific Fir.....	9	8	25	9	8	40	9	16	05	9	17	00	American.....	Dimon S. S. Corp.....	410	5	54	0	18	6	Tacoma, Wash.....	General	3,904	6,624	4,883	
Buenaventura.....	7	20	00	9	8	55	9	16	05	9	17	00	American.....	Panama R. R. S. S. Line.....	251	0	43	0	16	7	Guayaquil, Ecuador.....	General	726	2,873	1,776	
Soly.....	9	9	40	9	9	55	9	17	02	9	21	25	Norwegian.....	American Trading Co.....	382	0	54	0	25	3	Fremantle, Aust. lia.....	Sulphur	7,533	6,509	4,910	
Svealand.....	9	9	55	9	10	25	9	17	49	9	23	00	Swedish.....	Ore S. S. Corp.....	561	1	72	2	23	6	Cruz Grande, Chile.....	Ballast	15,425	4,421		
Thomas H.....	9	12	50	9	13	25	9	20	10	9	21	25	American.....	Richfield Oil Co.....	425	0	57	2	23	6	Los Angeles, Calif.....	Ballast	7,481	5,004		
Canadian.....	9	13	20	9	14	30	9	21	06	10	6	10	British.....	Can. Nat. Steamships.....	400	0	52	4	19	0	Dunedin, N. Z.....	General	3,535	6,228	4,491	
Transporter.....	9	13	45	9	14	45	9	22	14	10	15	00	British.....	Ellerman & Bucknall.....	455	0	58	1	22	0	Dunedin, N. Z.....	General	2,037	8,999	6,793	
City of Lyons.....	9	17	10	9	17	30	10	19	28	10	10	35	American.....	Almer-Hawaiian Line.....	472	3	57	2	19	6	Portland, Ore.....	General	3,844	9,258	6,944	
Mexican.....																										

* General, sulphur, and pipe.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Supply ship.

* General, sulphur, and pipe.

* Tanker.

* General, sulphur, and pipe.

* Tanker.

* General, sulphur, and pipe.

Western	2	22	15	3	6	31	3	13	35	3	13	35	American.....	Sun Oil Co.....	480	6	66	0	28	0	Los Angeles, Calif.....	Chester, Pa.....	Gasoline.....	12,937	9,607	0,551
Sun 1 10.....	3	5	15	3	6	51	3	14	10	3	16	05	Japanese.....	Kokusa Kisen Kaisha.....	385	0	51	0	27	3	Lands End, Eng.....	Wheat.....	7,900	6,213	4,665	
Glasgow Mart.....	3	7	25	3	8	06	3	14	50	3	16	10	Colombian.....	National Navigation Co.....	107	0	22	9	9	0	Christobal, C. Z.....	Coffee, matches	78	238	1,063	
Zurco 1 10.....	3	7	50	3	8	48	3	16	10	3	16	10	German.....	Hamburg-American Line.....	227	5	34	4	13	5	Christobal, C. Z.....	General	506	1,682	1,041	
Durazo.....	2	10	35	3	9	14	3	16	00	3	16	00	American.....	E. H. Norton.....	77	7	22	2	9	0	Guayaquil, Ecuador.....	Ballast	98		55	
White Shadow 11	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	New York, N. Y.....	Gasoline.....	12,103	9,474	6,489	
Hilda.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64	3	27	0	Lizards, Eng. 1 10.....	Gasoline.....	12,103	9,474	6,489	
Knudsen 1 10.....	4	1	30	4	13	50	4	13	50	4	13	50	Norwegian.....	Knut Knutsen.....	470	0	64</									

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Salt beam.	water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Niagara ¹² .	3	21.20	4	6.55	4	15.05	5	7.20	American.	U. S. Navy.	243.0	36.0	...	Balboa, C. Z.	Cristobal, C. Z.	General.	7,000	5,689	4,030
Boliver	3	21.20	4	7.05	4	16.10	5	10.50	Belgian.	Cie. Maritime Belge.	400.0	52.0	23.0	Vancouver, B. C.	Antwerp, Belgium.	General.	9,317	7,819	6,101
Barr.	4	0.15	4	8.08	4	20.00	5	00.35	Dutch.	Royal Neth. S. S. Co.	400.6	58.0	26.1	Corral, Chile	Hamburg, Germany	General.	5,412	7,946	5,698
Greylock	4	6.30	4	8.39	4	18.25	4	18.25	American.	Sea Shipping Co.	430.7	54.3	24.0	Everett, Wash.	Baltimore, Md.	Lumber, general.	7,806	5,987	4,072
Oilreliance ¹³ .	4	9.50	4	12.16	4	19.35	4	21.45	British.	Caucasian Oil Co., Ltd.	410.0	53.0	25.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	6,114	5,891	4,186
Canadian	4	14.00	4	14.54	4	22.25	5	00.55	British.	Can. Nat. Steamships.	400.5	52.4	23.0	Vancouver, B. C.	Montreal, Canada.	Lumber, general.	7,109	5,262	18,194
Importer	4	9.55	5	6.17	5	13.15	5	14.00	American.	Gracia Line.	586.4	80.3	28.0	San Francisco, Cal.	New York, N. Y.	General.	3,421	5,726	4,086
Pennsylvania.	4	20.00	5	6.46	5	13.45	5	21.08	American.	Panama-Pacific Line.	380.2	51.2	22.0	Talcahuano, Chile	New York, N. Y.	General.	11,298	9,841	6,946
Panquaco ¹⁴ .	5	1.50	5	6.51	5	14.00	5	15.00	Panamanian.	Panamanian Gov't.	125.6	23.5	...	Balboa, C. Z.	Cristobal, C. Z.	Gasoline.	5,638	8,552	6,235
Yankee Arrow	5	1.50	5	7.20	5	15.50	5	15.50	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	5,785	7,079	5,028
K. I.	5	2.30	5	7.48	5	15.15	5	15.15	American.	Luckenbach Line.	446.0	57.1	27.0	Portland, Oreg.	Boston, Mass.	General.	3,817	...	...
Iowan.	5	3.00	5	8.26	5	16.20	5	16.20	American.	Amer-Hawaiian Line.	407.7	53.7	24.0	Portland, Oreg.	Boston, Mass.	General.	5,578	6,650	4,919
Kinai Maru ¹⁵ .	5	8.15	5	8.59	5	16.45	5	16.45	Japanese.	Osaka Shosen Kaisha.	446.0	60.6	22.0	Kongkong, China.	New York, N. Y.	General.	2,023	2,656	1,621
Annie	5	8.25	5	11.31	5	18.50	6	00.10	Swedish.	Rederi Nordstjernan.	392.0	52.6	25.0	Vancouver, B. C.	Stockholm, Sweden	Wheat, fruit, gen.	9,662	7,593	5,637
Oneida.	5	8.50	5	14.11	5	20.35	5	20.35	American.	Ford Motor Co.	251.0	43.6	18.0	Cocos Bay, Col. Riv.	Chester, Pa.	Lumber, auto pis.	1,881	7,764	4,672
Theodore	5	14.20	5	15.12	5	22.40	6	10.17	Norwegian.	Fred Olsen & Co.	425.5	55.2	29.0	Vancouver, B. C.	London, England.	Wheat, general.	11,330	9,392	6,127
Roosevelt ¹⁶ .	5	17.40	5	16.16	5	13.35	6	16.05	Chilean.	Cia. Sud. Amer. de Vap.	424.8	56.0	24.0	Talcahuano, Chile	New York, N. Y.	General.	17,000	11,667	8,542
Teno.	5	22.55	6	6.41	6	14.45	6	15.45	Danzig.	W. Tankship Rederei.	500.0	71.2	30.0	Talara, Peru	Hamburg, Germany	Naphtha.	3,294	3,333	2,207
Tamihama	6	5.35	6	7.08	6	15.45	6	16.05	American.	Richfield Oil Co.	500.0	62.2	25.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	5,213	18,205	13,494
Sciota ¹⁷ .	6	6.30	6	7.10	6	16.35	6	16.35	American.	U. S. Navy.	155.0	30.0	...	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	2,292	2,656	1,621
Lycia ¹⁸ .	6	6.30	6	8.11	6	16.35	6	16.35	British.	Canadian Transp. Co.	300.0	44.2	22.0	Vancouver, B. C.	Sagua, Cuba.	Lumber, general.	8,860	9,457	6,367
Rangitane ¹⁹ .	6	20.45	6	10.26	6	18.20	6	18.20	British.	N. Z. Shipping Co.	531.0	70.2	27.0	Wellington, N. Z.	London, England.	Frozen, general.	2,278	2,746	1,626
Onondaga	6	14.45	6	18.23	6	18.40	7	10.40	American.	Ford Motor Co.	251.0	43.6	18.0	Alberding, Wash.	Philadelphia, Pa.	Lumber.	5,263	10,609	8,135
Paseora.	6	20.25	7	6.35	7	13.50	7	15.20	British.	Federal Steam Nav. Co.	479.8	64.2	25.0	New Caledonia.	Hull, England.	General.	12,103	8,645	6,054
Pacific Hemlock	6	22.30	7	6.48	7	14.40	7	14.40	American.	Dimon S. S. Corp.	409.7	52.2	22.4	Seattle, Wash.	Philadelphia, Pa.	Lumber, general.	8,859	7,382	5,603
Cid.	7	5.15	7	7.29	7	20.08	7	20.08	British.	Pacific Steam Nav. Co.	264.8	41.2	15.0	Pacasmayo, Peru	New York, N. Y.	Frozen, general.	718	1,132	741
Kent.	7	11.45	7	12.57	7	19.30	7	19.30	British.	Federal Steam Nav. Co.	460.0	62.6	22.0	Bluff, N. Z.	Glasgow, Scotland	Frozen, general.	9,066	7,978	5,839
Marie	8	2.00	8	6.09	8	13.40	8	13.40	Danish.	Anglo-Saxon Pet. Co.	466.3	61.8	26.1	Los Angeles, Calif.	Curacao, D. W. I.	Gasoline.	8,600	6,881	4,845
Maersk ²⁰ .	7	22.30	8	6.47	8	15.30	8	16.15	Danish.	East Asiatic Co.	425.0	50.5	28.0	Vancouver, B. C.	Copenhagen, Den.	General.	...	...	...
Chile ²¹ .	8	1.36	8	7.15	8	14.30	9	11.00	American.	U. S. Army.	508.0	55.4	24.0	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	...	...	...
Grant.	8	5.00	8	8.13	8	16.00	8	16.00	German.	Roland Line.	216.5	32.9	13.0	Guayquil, Ecuador	Cristobal, C. Z.	General.	...	...	...
Manitales.	8	10.45	8	11.28	8	18.35	8	21.20	American.	Richfield Oil Co.	430.2	59.2	27.2	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	...	...	...
Pat Doherty	8	10.45	8	11.28	8	18.35	8	21.20	American.	Richfield Oil Co.	430.2	59.2	27.2	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	...	...	...
Barbwin.	8	13.50	8	14.43	8	21.45	8	21.45	British.	Barr, Crombie & Co.	405.5	55.7	25.0	Mijillones, Chile.	Delaware River	Nitrates.	...	...	...

¹⁷ Raw silk, wood oil, wool, and general.¹⁸ For orders.¹⁹ Tug.²⁰ Revenue cutter.²¹ Motor ship.²² Survey ship.²³ Chrome ore, copra, and cocoa.²⁴ Balsa wood, coffee, rice, and ivory nuts.

San Rafael.....	8 14 ⁵⁰	8 15 39	8 22 55	8 22 55	American.....	Quaker Line.....	410.0	54.4	19.0	Portland, Oreg.....	Philadelphia, Pa.....	Lumber, general.....	3,246 ¹	6,484	4,675
Hague Mart.....	8 20 00	9 6 40	9 13 40	9 19 00	Japanese.....	Osaka Shoen Kaisha.....	407.2	50.8	18.5	Hongkong, China.....	Boston, Mass.....	Gas oil.....	1,859	6,533	4,772
Cathwood.....	9 2 40	9 6 58	9 15 05	9 15 05	American.....	Union Oil Co. of Calif.....	435.0	56.0	28.4	Los Angeles, Calif.....	Baltimore, Md.....	War Dept., gen.....	10,500	7,482	5,143
Somme.....	9 4 05	9 7 15	9 14 45	9 23 05	American.....	U. S. Army.....	448.0	58.0	23.0	San Francisco, Calif.....	Brooklyn, N. Y.....	Nitrates.....	493	204	735
Salvador.....	9 4 10	9 8 15	9 15 50	9 15 50	British.....	Pacific Steam Nav. Co.....	215.0	33.5	13.0	San Jose, Guatemala.....	Cristobal, C. Z.....	General.....	8,220	6,298	4,576
Kurdistan.....	9 8 35	9 9 20	9 18 10	9 19 50	American.....	Common Brethren.....	420.0	54.0	26.8	Antofagasta, Chile.....	Azores ¹⁶	General.....	4,731	7,049	4,941
Kentucky.....	9 5 14	9 10 03	9 18 18	9 18 18	American.....	Amer.-Hawaiian Line.....	414.5	53.7	24.04	Seattle, Wash.....	Boston, Mass.....	General.....	4,700	11,729	8,373
Karamca.....	9 3 30	9 12 36	9 19 05	9 19 05	British.....	Shaw, Savill & Albion.....	481.0	64.0	23.3	Dunedin, N. Z.....	London, England.....	General.....	4,700	11,729	8,373
Biscaya.....	9 9 15	9 13 32	9 20 25	9 20 25	German.....	Atlantic Tank Rhderei.....	431.0	55.0	26.0	Los Angeles, Calif.....	Avonmouth, Eng.....	Benzine.....	8,416	6,585	4,435

: Tanker.

²⁰ Peanut oil, beans, tea, bamboo, and general.²¹ Coffee, hides, bullion, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 3	Inapaquina ²¹ .	A. Tagaropulos.	Colon, Rep. of Panama.	August 3	Inapaquina ²¹ .	A. Tagaropulos.	Colon, Rep. of Panama.
August 3	Uta.	United Fruit Co.	Port Limon, Costa Rica.	August 3	Uta.	United Fruit Co.	New York via Habana.
August 3	Dorelian.	Leyland S. S. Line.	Liverpool via waypoints.	August 3	No. 9685 ²¹ .	Pan American Airways.	San Salvador and waypoints.
August 3	No. 9064 ²¹ .	Pan American Airways.	San Salvador via waypoints.	August 3	No. 142-M ²¹ .	Pan American Airways.	Miami via waypoints.
August 4	Annetta I. ²¹ .	A. Tagaropulos.	Colon, Rep. of Panama.	August 3	Cristobal.	Panama R. S. S. Line.	New York via Haiti.
August 4	Calamares.	United Fruit Co.	New York via Habana.	August 3	Cardago.	United Fruit Co.	New Orleans and waypoints.
August 4	No. 9670 ²¹ .	Pan American Airways.	San Salvador and waypoints.	August 4	Dorelian.	Leyland S. S. Line.	Tarata, Cuba.
August 4	Cundinamarca C-33 ²¹ .	Seadta Airplane Co.	Barranquilla & waypoints.	August 4	Annetta I. ²¹ .	A. Tagaropulos.	Colon, Rep. of Panama.
August 5	Magdalena.	Hamburg-American Line.	Hamburg via waypoints.	August 6	No. 9064 ²¹ .	Pan American Airways.	San Salvador via waypoints.
August 5	No. 945-M ²¹ .	Pan American Airways.	Talara via waypoints.	August 6	Calamares.	Pan American Airways.	Miami via waypoints.
August 6	Swiftwind.	C. D. Mallory & Co.	Curacao, D. W. I.	August 6	Magdalena.	Hamburg-American Line.	Port Limon, Costa Rica.
August 6	Tela.	United Fruit Co.	Cartagena, Colombia.	August 6	Tela.	United Fruit Co.	Puerto Colombia, Colon.
August 6	Zacapa.	United Fruit Co.	New Orleans, La.	August 6	Zacapa.	United Fruit Co.	New York via waypoints.
August 6	No. 9137 ²¹ .	Pan American Airways.	Miami via waypoints.	August 7	Swiftwind.	C. D. Mallory & Co.	Curacao, D. W. I.
August 6	No. 9085 ²¹ .	Pan American Airways.	San Salvador via waypoints.	August 7	Alamania.	Hamburg-American Line.	Guayaquil and waypoints.
August 7	Baracoa.	Colombian S. S. Line.	New York via waypoints.	August 7	No. 300-N ²¹ .	Pan American Airways.	Pto. Cabello and waypoints.
August 7	Pellerin de la Touche.	Standard Fruit & S. S. Co.	Havre via waypoints.	August 7	No. 144-M ²¹ .	Pan American Airways.	San Salvador and waypoints.
August 8	Magdalena.	Hamburg-American Line.	Port Limon, Costa Rica.	August 8	Baracoa.	Colombian S. S. Line.	New York via Kingston.
August 9	No. 144-M ²¹ .	Pan American Airways.	Pto. Cabello and waypoints.	August 8	Cundinamarca C-33 ²¹ .	Seadta Airplane Co.	Barranquilla and waypoints.
August 9	Tela.	United Fruit Co.	Pto. Colombia, Colombia.	August 8	Pellerin de la Touche.	French Line.	Havre via waypoints.
August 9	Parasmina.	United Fruit Co.	New Orleans and Habana.	August 9	Castilla.	United Fruit Co.	New Orleans and waypoints.
August 9	No. 142-M ²¹ .	Pan American Airways.	Miami via waypoints.	August 9	Amapala.	Standard Fruit & S. S. Co.	New Orleans and waypoints.
August 9	No. 9064 ²¹ .	Pan American Airways.	San Salvador and waypoints.				

²² Motor boat.

PORT OF BALBOA.

Real ²⁴ .	Hans Elliot.	Panama Bay.	R. P.	Real ²⁴ .	Hans Elliot.	Panama Bay.	R. P.
August 3.	Imperial Oil Co., Ltd.	Talara, Peru.	Calif.	August 4.	Saramacca.	United Fruit Co.	San Francisco, Calif.
August 4.	United Fruit Co.	Panama Bay.	R. P.	August 8.	Dos Hermanos ²⁴ .	A. Valdez.	Panama Bay.
August 8.	A. Valdez.	Panama Bay.	R. P.	August 8.	La Union ²⁴ .	A. Valdez.	Panama Bay.
August 8.	Des Hermanos ²⁴ .	Panama Bay.	R. P.	August 8.	Sambu ²⁴ .	Hans Elliot.	Panama Bay.
August 8.	La Union ²⁴ .	Panama Bay.	R. P.				
August 9.	Sambu ²⁴ .	Panama Bay.	R. P.				
August 9.	Hans Elliot.	Panama Bay.	R. P.				
August 8.	Hans Elliot.	Panama Bay.	R. P.				

²³ Air mail carrier.

* Other than ships passing through the Canal.

: Tanker.

²⁴ Motor schooner.

Commercial Traffic Through the Panama Canal in July, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for July, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	80	447,874	339,049	548,158	339,858	\$381,425.14	194,481
East coast of United States to west coast of South America:							
British	6	21,909	17,624	30,015	18,212	17,595.14	5,641
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	2,327
Norwegian	3	7,308	5,020	8,120	4,824	6,265.56	2,170
Swedish	1	4,496	3,743	15,337	4,385	3,237.12	
United States	13	57,223	45,525	80,073	45,533	46,650.66	16,268
Total	24	95,608	75,346	140,855	76,930	78,039.73	26,406
Europe to west coast of United States:							
British	5	25,247	21,845	35,211	21,660	18,240.00	
Danish	2	12,078	10,094	16,549	10,121	8,696.16	
Dutch	1	4,317	3,492	5,792	3,379	3,108.24	
French	1	5,385	4,595	7,650	4,435	3,877.20	
German	2	11,178	8,664	14,142	8,460	9,280.60	4,205
Italian	1	4,320	3,701	6,468	3,640	3,110.40	
Norwegian	6	29,823	25,005	41,922	24,847	21,472.56	
Total	18	92,348	77,396	127,734	76,542	67,785.26	4,205
East coast of United States to Far East:							
British	5	27,381	17,072	27,608	16,965	21,340.00	29,077
Danish	1	2,510	1,938	3,252	1,985	2,422.50	3,500
Japanese	6	31,569	25,163	39,140	24,626	31,298.75	36,180
United States	4	17,434	12,378	20,181	12,321	15,472.50	13,039
Total	16	78,894	56,551	90,181	55,897	70,533.75	81,796
Europe to west coast of Canada:							
British	6	35,590	22,394	40,703	23,906	27,992.50	9,358
Danish	1	5,660	5,233	6,919	5,223	6,541.25	5,611
French	1	7,146	4,020	8,068	4,497	5,025.00	2,781
German	2	13,500	8,186	14,501	8,543	10,232.50	11,840
Italian	1	6,041	5,092	7,057	4,455	6,365.00	2,468
Norwegian	2	11,626	6,970	11,390	7,092	8,712.50	5,220
Swedish	1	5,337	2,861	5,210	3,747	3,576.25	4,408
United States	1	4,614	3,400	5,689	3,400	4,250.00	7,351
Total	15	89,514	58,156	99,537	60,863	72,695.00	49,037
Europe to west coast of South America:							
British	5	27,378	20,860	34,683	21,510	26,075.00	22,761
Danish	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch	2	8,926	5,596	8,998	5,278	6,995.00	
French	1	5,563	4,282	6,863	4,287	5,352.50	7,614
German	4	20,568	15,442	24,475	15,195	19,302.50	16,243
Norwegian	1	3,820	2,333	3,886	2,335	2,916.25	6,100
Total	14	72,382	53,781	87,844	53,612	65,052.69	56,258
Cristobal to west coast of South America:							
Colombian	3	372	339	621	327	423.75	427
Dutch	1	742	294	780	323	367.50	9
German	4	3,491	2,260	4,347	2,334	2,825.00	687
Total	8	4,605	2,893	5,748	2,984	3,616.25	1,123

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Philippine Islands:							
British.....	4	25,712	13,980	26,087	14,243	\$17,475.00	9,390
Norwegian.....	1	6,829	3,973	6,687	4,085	4,966.25	3,918
United States.....	1	6,612	4,906	7,587	4,808	6,132.50	7,049
Total.....	6	39,153	22,859	40,361	23,136	28,573.75	20,357
East coast of United States to Australasia:							
British.....	5	26,286	17,479	28,221	17,672	21,848.75	18,707
Europe to Australasia:							
British.....	5	46,405	32,286	53,890	33,303	40,357.50	26,168
Cristobal to west coast of United States:							
United States.....	5	15,571	11,559	19,372	11,424	12,224.50	3,318
Cristobal to Balboa:							
Panamanian.....	1	47	47	86	47	56.40	30
United States.....	3	232	227	20	16	173.40	.....
Total.....	4	279	274	106	63	229.80	30
East coast of United States to west coast of Canada:							
British.....	1	5,308	3,028	4,971	3,033	3,785.00	.....
United States.....	2	7,862	5,866	9,474	5,852	7,332.50	9,494
Total.....	3	13,170	8,894	14,445	8,885	11,117.50	9,494
East coast of South America to west coast of United States:							
Danish.....	1	2,081	1,747	3,056	1,857	1,498.32	.....
United States.....	2	10,051	7,354	11,525	7,285	9,192.50	10,639
Total.....	3	12,132	9,101	14,581	9,142	10,690.82	10,639
Cristobal to west coast of Central America:							
British.....	2	2,322	1,930	3,661	2,061	2,412.50	1,663
Colombian.....	1	163	164	233	166	195.60	380
Total.....	3	2,485	2,094	3,894	2,227	2,608.10	2,043
Around the world:							
United States.....	2	18,423	12,651	21,017	12,651	15,813.75	5,977
Europe to west coast of Central America:							
French.....	1	4,101	3,247	5,280	3,228	4,058.75	1,854
German.....	1	3,533	2,542	4,201	2,554	3,177.50	1,763
Total.....	2	7,634	5,789	9,481	5,782	7,236.25	3,617
West Indies to west coast of Canada:							
British.....	2	4,271	3,718	5,848	3,692	4,635.00	7,341
Canadian intercoastal:							
British.....	2	9,181	6,918	11,136	6,861	8,647.50	8,934
East coast of Canada to west coast of South Amer- ica:							
British.....	2	12,989	11,069	20,336	11,398	9,352.08	.....
East coast of Canada to Australasia:							
British.....	2	9,618	7,682	12,586	7,734	9,602.50	6,341
East coast of Canada to west coast United States:							
United States.....	1	3,913	3,850	5,105	3,749	2,887.50	.....
East coast of Canada to west coast of Central America:							
British.....	1	193	187	263	176	233.75	175
East coast of Canada to Far East:							
Japanese.....	1	4,672	4,264	5,823	4,261	5,330.00	7,786
East coast of United States to Hawaii:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,229
East coast of Central America to Australasia:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	7,525

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to west coast of Canada:							
Norwegian.....	1	5,132	2,912	4,885	3,005	\$3,640.00	5,887
West Indies to west coast of Central America:							
German.....	1	1,469	1,155	1,930	1,128	1,057.68	.....
West Indies to Australasia:							
British.....	1	3,946	2,663	4,251	2,635	3,328.75	7,290
Europe to Far East:							
British.....	1	5,161	2,867	4,702	2,865	3,583.75	7,800
Supplemental bill.....						80.00	.....
Grand total, July, 1930...	230	1,129,916	837,604	1,389,381	842,686	947,428.30	575,964
Grand total, July, 1929...	273	1,291,823	991,474	1,618,784	990,494	1,119,496.15	909,976
Grand total, July, 1928...	272	1,269,085	965,479	1,580,367	976,284	1,103,618.21	748,160

PACIFIC TO ATLANTIC.

United States interoceanal:							
United States.....	92	504,358	385,805	621,114	386,359	\$482,135.59	695,394
West coast of Canada to Europe:							
British.....	16	85,446	58,046	94,661	58,186	72,557.50	121,508
Danish.....	2	12,767	8,394	14,642	8,942	10,492.50	15,740
Dutch.....	1	6,066	4,863	7,655	4,799	6,078.75	8,306
French.....	1	7,466	4,438	7,759	4,677	5,547.50	8,466
German.....	3	19,737	12,469	21,466	12,953	15,586.25	22,873
Italian.....	1	6,010	4,334	7,061	4,460	5,417.50	8,910
Norwegian.....	2	10,223	6,908	11,379	7,037	8,635.00	16,448
Swedish.....	1	5,485	3,406	5,558	4,246	4,257.50	7,350
United States.....	2	10,992	7,736	12,583	7,717	9,681.25	15,903
Total.....	29	164,192	110,594	182,764	113,017	138,253.75	225,504
West coast of South America to east coast of United States:							
British.....	9	43,204	35,195	60,429	36,689	42,886.81	67,167
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,308
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	15	66,446	55,085	96,422	57,037	68,419.85	145,739
Total.....	27	123,272	101,232	194,837	106,464	124,996.66	260,010
West coast of United States to Europe:							
Belgian.....	2	11,005	8,642	14,253	8,214	10,802.50	17,488
British.....	13	57,796	46,494	76,651	46,912	58,117.50	103,280
French.....	3	14,318	12,370	19,712	11,420	15,462.50	25,376
Greek.....	1	4,099	2,636	4,386	2,639	3,295.00	7,093
Norwegian.....	4	18,201	15,775	26,344	15,633	19,718.75	35,165
Panamanian.....	1	6,450	5,650	8,947	5,651	7,062.50	12,817
United States.....	1	8,619	7,026	11,247	6,953	8,782.50	15,365
Total.....	25	120,488	98,593	161,540	97,422	123,241.25	216,584
West coast of South America to Europe:							
British.....	6	32,962	26,168	43,060	26,363	32,710.00	35,818
Danzig.....	1	5,927	5,207	8,744	5,026	6,508.75	11,308
Dutch.....	1	3,195	2,494	3,981	2,423	3,117.50	4,851
French.....	1	4,932	4,219	6,669	4,224	5,273.75	3,777
German.....	6	29,270	19,419	31,805	19,246	24,273.75	40,010
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	2,222
Norwegian.....	1	3,965	2,637	4,436	2,664	3,296.25	3,839
Yugoslav.....	1	4,570	3,271	5,291	3,299	4,088.75	8,152
Total.....	19	103,523	73,814	127,373	76,774	92,267.50	109,977
Philippine Islands to east coast United States:							
Danish.....	1	4,483	2,495	4,194	2,532	3,118.75	4,451
Japanese.....	8	39,295	34,777	49,510	34,273	43,471.25	59,837
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	2,494
Swedish.....	1	1,513	1,307	1,600	1,054	1,633.75	2,400
United States.....	3	16,720	12,380	18,468	11,505	15,475.00	20,577
Total.....	14	68,966	54,957	80,816	53,352	68,696.25	89,759

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	9	80,507	56,576	93,056	57,888	\$70,720.00	43,353
French.....	1	5,623	4,343	7,007	4,402	5,428.75	3,707
Total.....	10	86,136	60,919	100,063	62,290	76,148.75	47,060
West coast of South America to Cristobal:							
Colombian.....	2	248	226	414	218	282.50	354
German.....	6	5,200	3,384	6,490	3,472	4,230.00	4,650
Swedish.....	1	746	600	1,036	582	750.00	113
Total.....	9	6,194	4,210	7,940	4,272	5,262.50	5,117
West coast of United States to Cristobal:							
United States.....	5	14,517	11,375	18,911	11,234	14,218.75	14,995
West coast of United States to West Indies:							
British.....	2	9,239	7,700	12,877	7,545	9,625.00	16,184
Norwegian.....	1	6,604	5,517	9,153	5,527	6,896.25	12,314
Swedish.....	1	6,295	5,189	8,945	6,592	6,486.25	12,132
Total.....	4	22,138	18,406	30,975	19,664	23,007.50	40,630
Australasia to east coast of United States:							
Norwegian.....	2	8,822	4,984	8,449	4,948	6,230.00	13,721
United States.....	1	5,167	3,816	6,094	3,816	4,770.00	6,600
Total.....	3	13,989	8,800	14,543	8,764	11,000.00	20,321
West coast of Canada to east coast United States:							
Norwegian.....	1	4,910	2,615	4,402	2,624	3,268.75	7,400
United States.....	2	8,308	6,124	9,884	6,158	7,655.00	12,032
Total.....	3	13,218	8,739	14,286	8,782	10,923.75	19,432
Hawaii to east coast of United States:							
United States.....	2	6,453	5,173	8,681	5,923	6,466.25	12,078
Canadian intercoastal:							
British.....	2	8,229	6,523	11,151	6,884	8,153.75	12,071
West coast of South America to east coast of Canada:							
British.....	1	7,711	6,391	11,404	5,691	7,988.75	16,199
Danzig.....	1	6,063	5,196	8,932	5,002	6,495.00	12,100
Total.....	2	13,774	11,587	20,336	10,693	14,483.75	28,299
West coast of Central America to Cristobal:							
British.....	2	2,293	1,920	3,703	2,065	2,400.00	822
Balboa to Cristobal:							
Panamanian.....	2	67	62	106	63	4,965.00	.....
West coast of Central America to east coast of United States:							
German.....	1	2,500	2,504	2,447	1,421	1,878.00	.....
West coast of United States to east coast of South America:							
United States.....	1	5,014	3,508	5,652	3,522	4,385.00	5,354
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	5,276
West coast of South America to West Indies:							
British.....	1	4,071	3,116	4,896	3,136	2,931.12	.....
Australasia to east coast of Canada:							
British.....	1	4,402	3,257	5,370	3,260	4,071.25	1,267
Far East to east coast of United States:							
Japanese.....	1	5,294	4,181	6,609	4,040	5,226.25	2,488
United States.....	1	6,226	4,938	7,615	4,838	6,172.50	6,445
Total.....	2	11,520	9,119	14,224	8,878	11,398.75	8,933

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Far East to West Indies:							
Norwegian.....	1	4,534	2,465	4,114	2,453	\$3,081.25	7,200
Grand total, July, 1930...	258	1,308,979	989,584	1,640,726	999,696	1,233,083.52	1,826,083
Grand total, July, 1929...	254	1,176,452	915,824	1,499,297	919,094	1,140,086.22	1,638,186
Grand total, July, 1928...	237	1,049,310	806,408	1,342,537	814,540	1,005,464.98	1,543,795

Traffic by Nationality for July, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of July, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for July, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	55	288,897	203,602	344,172	207,926	\$236,584.72	160,646
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,327
Colombian.....	4	535	503	854	493	619.35	807
Danish.....	5	22,329	19,012	29,776	19,186	19,158.23	9,111
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	4	13,985	9,382	15,570	8,980	10,470.74	7,549
French.....	4	22,195	16,144	27,861	16,447	18,313.45	8,249
German.....	14	53,739	38,249	63,596	38,214	45,875.88	34,738
Italian.....	2	10,361	8,793	13,525	8,095	9,475.40	2,463
Japanese.....	7	36,241	29,427	44,963	28,837	36,628.75	43,966
Norwegian.....	15	69,397	48,832	81,334	48,857	51,246.87	30,820
Panamanian.....	1	47	47	86	47	56.40	30
Swedish.....	2	9,833	6,604	20,547	8,132	6,813.37	4,408
United States.....	115	591,558	448,308	730,848	448,439	503,482.45	270,845
Total, July, 1930.....	230	1,129,916	837,604	1,389,381	842,686	947,428.30	575,964
Total, July, 1929.....	273	1,291,828	991,474	1,618,784	990,494	1,119,496.15	999,976
Total, July, 1928.....	272	1,269,085	965,479	1,580,367	967,284	1,103,618.21	748,160

* Includes supplemental bill of \$80.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,005	8,642	14,253	8,214	\$10,892.50	17,488
British.....	62	335,869	251,386	417,258	254,619	312,161.68	417,669
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	3,308
Colombian.....	2	248	226	414	218	282.50	354
Danish.....	3	17,250	10,889	18,836	11,474	13,611.25	20,191
Danzig.....	2	11,990	10,403	17,676	10,028	13,003.75	23,498
Dutch.....	2	9,261	7,357	11,636	7,222	9,196.25	13,157
French.....	6	32,345	25,370	41,147	24,723	31,712.50	41,326
German.....	16	56,707	37,776	62,208	37,092	45,958.00	67,533
Greek.....	1	4,099	2,636	4,386	2,639	3,295.00	7,093
Italian.....	3	24,712	14,733	30,448	17,959	18,416.25	11,132
Japanese.....	9	44,589	38,958	56,119	38,313	48,697.50	62,325
Norwegian.....	13	62,390	43,807	73,161	43,890	54,758.75	101,363
Panamanian.....	4	13,472	9,710	16,097	9,702	12,109.65	15,311
Swedish.....	6	22,956	17,988	47,815	21,236	22,485.00	65,791
United States.....	125	652,829	502,966	816,671	505,062	628,161.69	950,482
Yugoslavia.....	1	4,570	3,271	5,291	3,299	4,088.75	8,152
Total, July, 1930.....	258	1,308,979	989,584	1,640,726	999,696	1,233,083.52	1,826,083
Total, July, 1929.....	254	1,176,452	915,824	1,499,297	919,094	1,140,086.22	1,638,186
Total, July, 1928.....	237	1,049,310	806,408	1,342,537	814,540	1,005,464.98	1,543,795

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	2	11,005	8,642	14,253	8,214	\$10,892.50	17,488
British	117	624,757	454,983	761,430	462,545	* 548,746.40	578,315
Chilean	2	9,377	6,899	14,629	7,952	8,623.75	5,635
Colombian	6	783	729	1,268	711	911.85	1,161
Danish	8	39,579	29,901	48,612	30,669	32,769.48	24,302
Danzig	3	18,117	15,671	26,615	15,035	17,415.19	23,408
Dutch	6	23,246	16,739	27,206	16,212	19,666.99	21,706
French	10	54,540	41,514	69,008	41,170	50,025.95	49,575
German	30	110,446	76,025	125,894	75,306	91,843.88	102,271
Greek	1	4,099	2,636	4,386	2,639	3,295.00	7,093
Italian	5	35,073	23,526	43,973	26,084	27,891.65	13,600
Japanese	16	80,830	68,385	101,032	67,200	85,326.25	196,291
Norwegian	28	131,787	92,639	154,495	92,747	106,035.62	132,183
Panamanian	5	13,519	9,757	16,183	9,749	12,166.05	15,341
Swedish	8	32,789	24,592	68,362	29,363	29,238.37	70,199
United States	240	1,244,378	951,274	1,547,519	953,501	1,131,644.14	1,221,327
Yugoslav	1	4,570	3,271	5,291	3,299	4,083.75	8,152
Total, July, 1930	438	2,438,895	1,827,183	3,030,107	1,842,382	2,180,511.82	2,402,047
Total, July, 1929	527	2,468,280	1,909,834	3,118,081	1,909,583	2,259,582.37	2,598,162
Total, July, 1928	509	2,318,395	1,771,837	2,922,904	1,779,961	2,109,083.19	2,291,955

* Includes supplemental bill of \$80.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 2, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Adolf von Baeyer	Hamburg-American Line		July 27		319
Teutonia	Hamburg-American Line		July 27		91
Heredia	United Fruit Co.		July 27		11
Pastores	United Fruit Co.	July 27	July 27	3 ¹	181 ¹
Erfurt	Roland Line	July 27	July 27	73	103
Takaoka Maru	Nippon Yusen Kaisha	July 27	July 27	74	(²)
Abraham Lincoln	Fred Olsen & Co.	July 27	July 23	341	(²)
Iriona	United Fruit Co.	July 27	July 23	11	88
Daytonian	Leyland S. S. Line	July 27	July 29	828	(²)
Venezuela	Panama Mail S. S. Co.	July 28	July 29	399	318
Banam	United Fruit Co.	July 28	July 29	19	(²)
Ulua	United Fruit Co.	July 28	July 30	797	47
Cerigo	Hamburg-American Line	July 28	July 29	581	
San Vincente	Quaker Line	July 29	July 29	3	(²)
Caldas	National Navigation Co.		July 29		211
Atlantian	Leyland S. S. Line		July 29		65
Oakland	Hamburg-American Line	July 29	July 29	59	112
Santa Elisa	Grace Line	July 29	July 30	108	173
Venezuela	Royal Netherlands S. S. Co.	July 29	July 30	174	(²)
Pacific Exporter	Furness, Withy & Co.	July 29	July 31	(¹)	461
Santa Maria	Union Oil Co.	July 29	July 31	13,000	(²)
City of San Francisco	Panama Mail S. S. Co.		July 30		1,365
Pearl Marie	R. Feuillebois	July 30	July 30	(¹)	17
Galicia	Hamburg-American Line	July 30	July 31	63	(²)
Castilla	United Fruit Co.	July 30	July 31	695	179
Sixaola	United Fruit Co.	July 30	July 31	373	258
Cali	North German Lloyd	July 30	August 2	861	185
Finn	Aluminium Line	July 31	July 31	272	(²)
Champerico	Pacific Steam Navigation Co.	July 31		276	
Orazio	Italian Line	July 31	August 2	85	472
Cristobal	Panama R. R. S. S. Line	July 31		3,511	
El Salvador	Panama Mail S. S. Co.	July 31	August 1	569	149
Bolivar	Colombian Line	July 31	August 1	294	429
Aconagua	Chilean Line	August 1	August 1	(¹)	194
San Jose	United Fruit Co.	August 1	August 2	545	796
American Star	Nelson Line	August 1	August 2	343	(¹)
Helder	Royal Netherlands S. S. Co.	August 1	August 2	240	143
Baralt	Royal Netherlands S. S. Co.	August 1		600	
Venezuela	Royal Netherlands S. S. Co.	August 1	August 2	(²)	744
Atlantida	Standard Fruit & S. S. Co.	August 1	August 2	168	387
Iriona	United Fruit Co.	August 1	August 2	394	267
Ludwigshafen	North German Lloyd	August 2		51	
Dora K.	R. Feuillebois	August 2	August 2	(¹)	21
Los Angeles	Hamburg-American Line	August 2		26	
Zenon	French Line	August 2		440	
Santa Barbara	Grace Line	August 2		95	
Cartago	United Fruit Co.	August 2		141	
Excuse Fuego	A. A. Conolly & A. Papi		August 2		49

¹ No cargo discharged.² No cargo laded.³ One package.

Osaka Shosen Kaisha Inaugurates New Express Service between New York and Far East through the Panama Canal.

The motor ship *Kinai Maru*, of the Osaka Shosen Kaisha, transited the Canal from the Pacific August 5, 1930, en route from Hongkong, Yokohama, and other Far Eastern ports, via Los Angeles and the Panama Canal, to New York, in a new express service. This vessel is reported as the first of six motor ships built for this trade. The other five, which are to be added during the remainder of the year, are the *Tokai Maru*, *Sanyo Maru*, *Hokuroku Maru*, *Kwanto Maru*, and *Kwansai Maru*. All are equipped with specially built silk rooms with a capacity of 857 tons of raw silk, have 300 tons refrigerated space, and deep tanks for carrying oil in bulk.

The *Kinai Maru* is of 8,365 registered gross, and 5,046 net tons, with length of 446 feet and beam of 60.6 feet.

Thatcher Highway.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 5, 1930.

To all concerned:

1. The road now being constructed from the Canal to the Zone boundary near Arraijan is hereby designated Thatcher Highway.

2. This action is taken on the suggestion of the Panama Federation of Highway Education and also in recognition of the distinguished services of the Honorable Maurice H. Thatcher in the interest of The Panama Canal, both as a member of the Isthmian Canal Commission and as a Member of Congress.

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 8, 1930.

No. 731.

The following notice was received by the Hydrographic Office from the Assistant Superintendent of the Lighthouse Subdivision:

Panama Canal, Atlantic entrance, West breakwater beacon temporarily discontinued.—Effective August 7, 1930, the West breakwater beacon was temporarily discontinued until further notice.

A temporary flashing light of same characteristics will be installed on "A" frame of wrecking barge located slightly to west of beacon which at times will be obscured to the south by the "A" frame legs. Other lights may show from barge.

H. BURGESS,
Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address

The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 20, 1930. No. 3.

Completion of Sixteen Years of Canal Operation.

The Panama Canal completed 16 years of operation at the close of business on August 14, 1930, having been opened to commerce on August 15, 1914. During the 16 years of operation, 60,133 commercial vessels have transited the Canal, aggregating 267,490,045 net tons, Panama Canal measurement, on which tolls amounting to \$250,660,068.98 were levied, and which carried 279,338,333 long tons of cargo. Of these totals, the past 10 years have accounted for 82 per cent of the transits, 87 per cent of the net tonnage, 86 per cent of the tolls collected, and 86 per cent of the cargo carried.

Lines to the Panama Canal.

A new edition of the pamphlet, "Lines to the Panama Canal," revised as of June 1, 1930, has been issued by The Panama Canal and is being distributed to steamship lines and agencies, travel bureaus and similar organizations. The pamphlet contains the following information:

Services through the Canal, classified by principal trade routes; air services; passenger connections from the Canal, with fares; list of steamship lines, etc., having agencies on the Isthmus, with the names of their representatives; list of the agents on the Isthmus for steamship lines, air lines, oil companies, and other maritime interests, showing their locations and telephone numbers; consular and diplomatic representatives in the cities of Panama and Colon and the Canal Zone, with their telephone numbers; miscellaneous information concerning tolls charges, facilities for shipping, distances saved by the use of the Canal, etc.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,

BALBOA HEIGHTS, C. Z., August 15, 1930.

No. 734.

Cartagena, Colombia, wharf destroyed. The following is quoted from the "Daily Memorandum" of August 8, 1930, published by the Hydrographic Office of the U. S. Navy:

The American Consul at Cartagena, in a telegram dated August 5th, states that the only wharf at Cartagena was destroyed by fire on the night of August 4th.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, August 16, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.			Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.		Net.
Washington Steel	9	15	10	6	15	10	12	51	French	French Line	470.0	61.0	19.8	Havre, France	Vancouver, B. C.	General	1,829	10,332	7,475	
Mariner	9	19	10	6	30	10	14	00	American	Isthmian S. S. Lines	424.2	56.2	23.0	Baltimore, Md	Vancouver, B. C.	General	6,112	7,611	5,450	
President	10	5	10	7	20	10	14	22	American	Dollar Line	502.0	62.2	24.0	New York, N. Y.	San Francisco, Cal.	General	3,038	12,618	9,251	
Harrison	9	13	10	7	30	10	15	05	American	Husteca Petroleum Co.	320.0	45.1	17.3	Aruba, D. W. I.	Balboa, C. Z.	Gasoline	2,927	3,225	2,235	
Charles E.	10	7	10	8	40	10	16	00	Norwegian	A. Johre	552.0	77.0	21.0	Sandford, Nor'y	Wellington, N. Z.	Ballast	18,536	12,676	12,676	
Krismo	10	8	10	9	20	10	17	07	Japanese	Kokusa Kisen Kaisha	385.0	51.0	21.8	Houston, Tex.	Japan	Scrap iron	7,264	5,923	4,409	
Chile Maru	10	8	15	10	9	20	10	17	07	Japanese	Kokusa Kisen Kaisha	385.0	51.0	21.8	Houston, Tex.	Japan	Scrap iron	7,264	5,923	4,409
Volunteer	10	12	55	10	13	20	21	03	American	Tampa Intercocean Co.	410.0	56.0	27.0	New Orleans, La.	Manila, P. I.	Case oil, general	8,698	8,214	6,183	
Sunol	10	14	25	10	14	20	21	50	American	Sun Oil Co.	480.6	66.0	21.7	Chester, Pa.	Los Angeles, Calif.	Ballast	9,619	6,146	4,556	
Colombo	10	7	15	11	6	00	11	14	30	Italian	Nav. Gen. Italiana	518.0	64.0	26.8	Genoa, Italy	Valparaiso, Chile	General	2,194	12,553	7,516
Vandura	10	18	25	11	6	00	11	13	05	British	Gow Harrison & Co.	375.0	51.6	21.5	Newcastle, England	Los Angeles, Calif.	Ballast	5,037	3,537	3,537
Vendemiare	10	19	10	7	10	11	14	48	French	Anglo-Saxon Pet. Co.	468.0	62.0	22.0	Antwerp, Belgium	Los Angeles, Calif.	Ballast	5,037	3,537	3,537	
India Arrow	11	8	40	11	8	50	11	17	13	American	Standard Transp. Co.	468.3	63.0	27.4	Beaumont, Tex.	Dairen, China	Kerosene	11,750	10,084	7,388
Lochgoil	10	13	11	9	25	11	16	51	British	Royal Mail S. P. Co.	227.0	34.0	13.8	Rotterdam, Holland	Guayaquil, Ecuador	General	132	1,633	1,041	
Durazo	3	16	10	11	10	11	17	42	German	Hamburg-American Line	393.0	43.0	19.6	New York, N. Y.	Callao, Peru	Gen., cattle, coal	2,042	2,844	1,748	
Alvarado	10	23	11	11	30	11	19	04	British	Pacific Steam Nav. Co.	300.0	51.0	16.0	Tyne, England	Valparaiso, Chile	Gen., machinery	1,740	4,927	3,597	
Cedar Branch	11	11	55	11	12	10	11	18	40	British	F. & W. Ritson	370.0	53.2	20.7	New York, N. Y.	Talcahuano, Chile	General	1,740	4,927	3,597
Santa Inez	11	12	40	12	6	07	12	13	08	American	Grace Line	370.0	53.2	20.7	New York, N. Y.	Talcahuano, Chile	General	1,740	4,927	3,597
Sotola	11	12	40	12	6	15	12	15	51	American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Steel, general	1,376	6,255	4,016
Texmar	11	17	15	12	5	55	12	14	02	American	Calmar S. S. Corp.	410.5	54.3	22.0	Baltimore, Md	Seattle, Wash.	Steel, general	5,937	6,567	4,909
Col	12	5	25	12	7	20	12	15	05	American	Anglo-American Oil Co.	513.0	68.2	20.0	London, England	Los Angeles, Calif.	Ballast	11,719	8,619	
Abdel	12	6	30	12	8	25	12	15	51	British	British Molasses Co.	475.0	63.0	22.0	Grenock, England	Los Angeles, Calif.	Ballast	1,952	5,776	4,081
empress	11	1	15	12	10	12	16	28	American	Panama Mail S. S. Co.	360.0	51.0	21.3	New York, N. Y.	San Francisco, Cal.	General	2,251	1,132	741	
Guatemala	8	16	10	9	40	12	17	02	German	North German Lloyd	216.5	32.9	12.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	2,289	6,755	4,895	
Manizales	12	2	10	12	10	35	12	18	04	American	Quaker Line	410.5	54.0	17.7	Philadelphia, Pa.	Tacoma, Wash.	General	2,289	6,755	4,895
San Marcos	12	9	20	12	11	55	12	19	02	American	Chile S. S. Co.	391.8	51.3	20.0	Providence, R. I.	San Francisco, Cal.	Ballast	2,559	7,107	5,041
Chiloil	12	9	20	12	11	55	12	19	02	American	Chile S. S. Co.	391.8	51.3	20.0	Providence, R. I.	San Francisco, Cal.	Ballast	2,559	7,107	5,041
Pennsylvania	12	12	50	12	13	10	12	19	50	British	Amer.-Hawaiian Line	407.7	53.7	20.0	Boston, Mass.	Seattle, Wash.	General	2,559	7,107	5,041
Cape Horn	12	13	35	12	13	10	12	19	50	British	Amer.-Hawaiian Line	407.7	53.7	20.0	Boston, Mass.	Seattle, Wash.	General	2,559	7,107	5,041
Nitokris	12	13	35	12	13	10	12	19	50	British	Amer.-Hawaiian Line	407.7	53.7	20.0	Boston, Mass.	Seattle, Wash.	General	2,559	7,107	5,041
Legato	12	9	40	12	14	25	12	22	32	German	Cuban Sugar Co.	425.0	56.0	17.0	Hamburg, England	Vancouver, B. C.	Sugar	4,014	6,813	4,838
Nitokris	12	7	43	12	14	40	12	22	32	British	Hamburg-American Line	411.0	50.1	24.0	Hamburg, Germany	Valparaiso, Chile	General	3,484	6,652	4,704
Vanderdijk	12	15	53	13	13	13	13	13	30	Dutch	Pacific Steam Nav. Co.	385.0	52.0	25.2	Hull, England	Corral, Chile	General	6,651	6,656	3,823
Yonachichi	13	2	35	13	7	05	13	15	38	American	Holland-American Line	469.4	58.4	19.5	Rotterdam, Holland	Vancouver, B. C.	General	1,379	8,515	6,060
Horace	13	2	35	13	7	05	13	15	38	American	Rosevelt S. S. Co., S.B.	402.0	54.0	26.0	New York, N. Y.	Freemantle, Australia	Asphalt, general	6,733	6,996	5,042
Lukenbach	13	6	25	13	7	18	13	15	02	American	Lukenbach Line	445.0	58.0	21.0	Boston, Mass.	Seattle, Wash.	General	3,724	8,699	6,363
Tanker.																				

⁴ Tug, towing barge.³ Whaler.² Motor ship.¹ Tanker.

San Zofio ¹ ...	13	12.15	13	12.25	13	19.54	13	21.20	British.	Anglo-Mexican Oil Co.	400.0	52.0	26.2	Pt. Mexico, Mexico	Valparaiso, Chile.	7,619	6,032	3,892
Varg ² ...	13	12.45	13	13.00	13	20.50	13	23.14	Norwegian.	Standard Shipping Co.	330.6	55.2	18.0	Copenhagen, Den.	Talara, Peru	5,983	3,856	
Callandria ¹ ...	13	12.50	13	13.50	13	21.15	13	22.50	British.	H. M. Thomson.	400.0	52.0	25.0	Port Arthur, Tex.	Los Angeles, Calif	4,274	4,777	
El Lobo ¹ ...	13	15.00	13	15.10	13	21.54	14	00.02	British.	Atlantic Refining Co.	335.2	51.0	20.6	Curacao, D. W. I.	Guayaquil, Ecuador	4,506	4,851	
Minister																		
Wedel ¹ ...	13	15.58	13	20.10	14	9.04	14	10.05	Norwegian.	Anglo-Saxon Pet. Co.	416.2	58.2	18.0	Newcastle, Eng'd.	Los Angeles, Calif	7,304	4,912	
Robert E.																		
Hopkins ¹ ...	14	00.10	14	6.35	14	13.32	14	14.40	American.	Tidewater Oil Co.	424.0	58.2	22.0	New York, N. Y.	Los Angeles, Calif	7,333	5,182	
Labrador ¹ ...	13	23.00	14	6.50	14	14.14	14	21.35	Belgian.	Bernuth & Lembeke.	440.8	57.4	27.0	Amsterdam, Holl'd	Vancouver, B. C.	5,200	4,976	
Nedrol ² ...	14	8.20	14	9.05	14	15.41	14	21.00	Danish.	DuPont de Nemours.	380.8	54.0	19.3	Baltimore, Md.	Talcahuano, Chile.	2,268	4,558	
Hoffron.	14	9.25	14	9.35	14	16.24	14	17.40	American.	Norton, Lilly & Co.	440.0	56.0	15.6	Baltimore, Md.	Everett, Wash.	8,312	6,097	
Wiral.	14	9.55	14	10.00	14	16.55	14	18.10	British.	Wiral Transport Co.	385.0	53.0	19.0	New York, N. Y.	Fremantle, Austral.	2,903	3,661	
Tlaman ² ...	14	9.00	14	11.40	14	18.25	14	19.48	British.	Canadian Transp. Co.	400.8	53.0	19.0	Corner Brook, N.F.	Los Angeles, Calif	4,006	6,903	
Sir Karl																		
Kindson ¹ ...	14	12.05	14	12.30	14	19.30	14	23.22	Norwegian.	Anglo-Saxon Pet. Co.	450.5	59.2	19.0	Rotterdam, Holl'd	Los Angeles, Calif	8,045	5,592	
Maria Bakke ² ...	14	11.55	14	13.45	14	21.16	15	3.23	Norwegian.	Scand. So. Pacific Co.	375.0	52.5	24.9	Stemstad, Nor'y	Corral, Chile	7,327	5,077	
Cauca ² ...	3	14.50	14	13.10	14	21.17	14	21.30	Colombian.	National Navigation Co.	107.2	62.0	11.3	Cristobal, C. Z.	Buenaventura, Col.	175	1,563	
Pacific																		
Pioneer ² ...	13	5.55	14	14.00	14	22.01	14	23.00	British.	Furness, Withy & Co.	435.9	60.5	18.3	Glasgow, Scotland.	Vancouver, B. C.	996	9,030	
Vancouver																		
City ² ...	14	15.00	14	15.10	14	22.47	16	9.35	British.	Sir W. R. Smith & Sons	415.0	55.0	25.0	Tampa, Fla.	Sekoshin, China.	8,369	7,272	
Maroc.	14	9.45	14	18.15	15	9.36	15	10.59	American.	Ore S. Corp.	550.3	72.2	22.2	Baltimore, Md.	Cruz Grande, Chile	15,551	4,297	
Paul Shoup ¹ ...	14	21.40	15	6.15	15	13.39	15	14.50	American.	Tidewater Oil Co.	421.4	58.2	22.0	New York, N. Y.	San Francisco, Cal.	7,333	5,182	
Cape Ortega.	15	2.50	15	6.20	15	14.09	15	15.40	British.	J. Jones	405.0	52.0	24.2	Barbados, B.W.I.	Vancouver, B. C.	7,000	5,650	
El Aleto ¹ ...	15	00.25	15	7.45	15	15.13	15	21.25	British.	Imperial Oil Co.	440.8	57.6	22.6	Halifax, N. S.	Talara, Peru	7,555	5,049	
Hollywood	15	8.55	15	9.55	15	17.49	15	19.00	American.	Pac.-Arg.-Brazil Line.	410.5	54.3	22.6	Rosario, Argentine.	Los Angeles, Calif	5,476	6,584	
Canadian																		
Leader	15	1.00	15	11.00	15	18.40	15	19.45	British.	Can. Nat. Steamships	400.3	52.4	23.1	Montreal, Canada	Adelaide, Australia	2,647	5,891	
Zealandie ² ...	15	13.15	15	13.25	15	20.29	16	7.16	British.	Shaw, Savill & Albion.	482.0	64.0	22.1	Liverpool, England	Auckland, N. Z.	5,630	11,819	
St. Mihail ⁵ ...	15	3.20	15	14.30	15	21.00			American.	U. S. Army.	430.9	58.2	24.4	New York, N. Y.	Balboa, C. Z.	350	8,367	
Gr. M. H.																		
Lio ¹ ...	15	16.40	15	17.05	16	9.34	16	10.50	American.	Arrow Line.	402.0	53.0	17.0	Baltimore, Md.	Seattle, Wash.	2,863	6,575	
Sherman.	15	19.15	15	19.40	16	11.39	16	10.00	American.	Standard Transp. Co.	431.0	59.0	18.3	Boston, Mass	Los Angeles, Calif	7,846	4,912	
Motor Sailor.										U. S. Navy.				Cristobal, C. Z.	Gatun, C. Z.		5,112	
Canadian																		
Seigneur.	15	21.40	16	6.15	16	13.10	16	14.15	British.	Can. Nat. Steamships	400.0	52.0	18.6	Montreal, Canada	Vancouver, B. C.	2,000	5,393	
Point Permin.	16	2.00	16	7.09	16	14.17	16	15.35	American.	Swayne & Hoyt.	324.0	46.2	17.6	Corpus Christi, Tex	San Francisco, Cal.	2,364	4,182	
Tacoma.	14	22.45	16	10.34	16	17.00	16	20.52	German.	Hamburg-American Line	477.0	61.0	21.10	Hamburg Germany	Tacoma, Wash.	3,752	2,617	
Gisla ² ...	16	10.05	16	10.50	16	18.02	16	19.00	Norwegian.	Isbrandtsen Moller	360.5	51.2	20.9	Baltimore, Md.	Manila, P. I.	5,400	5,101	
Corinto.	7-1	21.40	16	11.10	16	19.40	16	20.05	American.	Panama Mail S. S. Co.	261.1	40.0	15.0	Cristobal, C. Z.	San Francisco, Cal.	6,100	3,735	
San Mateo.	15	13.00	16	12.05	16	19.30	16	20.40	American.	United Fruit Co.	315.2	44.2	18.9	Cristobal, C. Z.	San Francisco, Cal.	260	3,496	
Banta.	16	8.00	16	12.10	16	19.36	16	20.40	Norwegian.	William Hansen.	270.1	38.1	10.3	Pt. Colombia, Col.	Callao, Peru.	1,906	1,181	
Kallisto ⁶ ...	16	10.20	16	13.50	16	22.15			British.	L. D. Mitchell.	163.0	28.5	15.0	New York, N. Y.	Los Angeles, Calif	454	323	
Columbian.	16	19.30	16	19.50	17	9.16	17	10.30	American.	Amer.-Hawaiian Line	404.0	54.0	21.2	Boston, Mass	Portland, Oreg	3,043	4,450	
Kayak										Hugh Grages				Cristobal, C. Z.	Balboa, C. Z.	1	1	
Kuyak										William H. Strong.				Cristobal, C. Z.	Balboa, C. Z.	1	1	

* Transport.

* Tanker.

* Yacht.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Jane West 7.	9	8.28	9	...	...	...	Panamanian	United Fruit Co.	416.8	56.1	26.0	Balboa, C. Z.	Gatun Lake, C. Z.	Gasoline.	7,473	6,925	5
New Jersey 7.	10	4.25	10	6.50	10	13.35	American	The Texas Co.	351.3	51.4	24.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	5,778	5,944	5,014
Bryne 7.	9	19.40	10	6.50	10	14.10	Norwegian	Austrian Dispatch Line	251.0	43.6	16.2	Englewood, B. C.	Boston, Mass.	Lumber	1,001	2,574	1,944
Guayaquil	10	4.10	10	7.06	10	14.05	American	Panama R. R. S. S. Line	431.0	59.2	27.0	Guayaquil, Ecuador	New York, N. Y.	General	9,698	8,093	5,247
Cities Service	10	6.50	10	7.56	10	15.00	American	Cities Ser. Transp. Co.	431.0	59.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	1,239	10,091	7,583
Oklahoma	10	7.20	10	8.36	10	16.35	American	Standard Oil Co., N. Y.	499.0	62.7	29.0	Los Angeles, Calif.	Boston, Mass.	Gasoline	7,831	8,927	4,993
Java Arrow	10	00.55	10	9.13	10	17.35	American	McCormick S. S. Co.	409.6	54.1	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,713	8,548	6,288
Alsaroka	10	4.35	10	10.08	10	18.50	British	Royal Mail S. S. Co.	439.2	58.3	28.0	Vancouver, B. C.	Rotterdam, Holland	General	6,030	4,952	4,532
Nebraska	10	5.20	10	10.17	10	18.25	German	North German Lloyd	333.1	54.3	14.5	Valparaiso, Chile	Bremen, Germany	Ballast	9,291	7,012	5,022
Angar	10	5.20	10	10.17	10	18.25	German	Axel Brostrom & Son	330.5	50.6	25.0	Olympia, Wash.	Antwerp, Belgium	Lumber	6,370	7,832	5,237
Fernia	10	15.00	10	16.18	11	11.00	Swedish	Anglo-American Oil Co.	424.5	57.0	27.0	Los Angeles, Calif.	Ellensburg, Pa., Eng	Gasoline	6,300	6,755	4,688
Seminole 7.	10	20.10	11	6.39	11	13.55	British	...	385.5	55.0	27.0	Los Angeles, Calif.	Baltimore, Md.	Sugar	7,200	...	...
Chickasaw	10	9.15	11	7.10	11	15.05	American	Isthmian S. S. Lines	298.6	40.0	21.0	Kahului, T. H.	New Orleans, La.	General	6,750	6,784	3,107
Santa Tecla	10	10.55	11	7.22	11	15.45	American	N. O. & S. S. Co.	401.1	54.3	24.1	Talcahuano, Chile	Preston, England	General	6,695	7,141	4,458
East Lynn	10	23.30	11	7.36	11	16.10	British	Sir W. R. Smith & Sons	409.8	53.8	23.0	N. Westmer, B. C.	Hamburg, Germany	Saltpeeter, general	7,531	7,611	5,150
Emil Kindorf	11	6.15	11	8.08	11	16.55	German	Hamburg-American Line	424.2	56.2	25.3	Corral, Chile	London, England	General	11,319	7,809	5,139
Steel Trader	11	4.55	11	8.41	11	17.35	American	Isthmian S. S. Lines	449.1	57.2	29.0	Vancouver, B. C.	Baltimore, Md.	Iron ore	6,300	6,755	4,688
Santore	11	4.55	11	8.41	11	17.35	American	Ore S. S. Corp	449.1	57.2	29.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	6,300	6,755	4,688
Henry S.	11	12.00	11	12.45	11	20.40	American	Argonaut S. S. Co.	404.6	53.9	25.0	Everett, Wash.	Pt. Newark, N. J.	Lumber	7,200	...	...
Grove	11	15.00	11	16.38	12	11.00	American	...	405.0	52.0	25.0	Seattle, Wash.	Avonmouth, Eng	General	...	3,225	2,235
Cape of Good Hope	11	17.00	11	17.34	12	12.15	British	Lyle Shipping Co.	320.0	45.1	14.0	Seattle, Wash.	Aruba, D. W. I.	Ballast	4,610	8,543	6,402
Charles E.	11	17.00	11	17.34	12	12.15	British	...	436.0	57.0	24.0	Seattle, Wash.	Mobile, Ala.	Sugar, general	8,248	5,612	4,119
Harwood	12	6.10	12	14.35	12	14.35	American	Huasteca Petroleum Co.	390.0	53.5	25.0	Balboa, C. Z.	Cobb, Ireland	Wheat	6,042	8,543	6,427
John	11	21.50	12	6.40	12	13.15	American	Lukenbach Line	436.0	57.0	24.0	Seattle, Wash.	Boston, Mass.	General, lumber	5,101	8,567	6,020
Carlton	11	23.15	12	7.15	12	18.30	British	R. Chapman & Son	436.6	57.2	26.0	Portland, Oreg	Boston, Mass.	General	5,063	10,423	7,456
Edward	12	1.00	12	8.03	12	18.00	American	Lukenbach Line	443.1	59.8	22.0	Seattle, Wash.	Portland, Oreg	General	5,710	4,791	3,392
Lukenbach	12	2.27	12	8.31	12	19.05	American	Amer.-Hawaiian Line	473.0	60.1	23.0	Portland, Oreg	Portland, Oreg	General	7,986	10,086	7,296
California	12	3.25	12	9.00	12	19.30	British	Federal Steam Nav. Co.	360.6	51.0	23.0	N. Plymouth, N. Z.	Glasgow, Scotland	General	7,600	5,756	4,118
Westmoreland	12	3.25	12	9.00	12	19.30	British	North German Lloyd	480.4	53.5	27.5	Antofagasta, Chile	Bremen, Germany	General	16,500	12,339	7,717
Mia	12	11.55	12	12.26	12	20.30	British	Furness, Withy & Co	405.3	53.5	25.0	Vancouver, B. C.	London, England	General	29,000	14,325	4,635
Pacific Grove	12	11.55	12	12.26	12	20.30	British	Lyle Shipping Co.	521.5	70.2	31.2	Victoria, B. C.	Rotterdam, Holland	Crude oil	9,124	7,394	5,099
Cape Verde	12	12.15	12	12.56	13	11.15	British	Imperial Oil Co. Ltd	549.6	56.2	26.0	Trinidad, Peru	Montreal, Canada	Iron ore	...	...	...
Calgarothie 7.	13	00.55	13	6.05	13	15.25	American	Ore S. S. Corp	434.8	56.2	26.0	Cruz Grande, Chile	New York, N. Y.	Gasoline	...	...	...
Labore	13	00.55	13	6.05	13	15.25	American	...	...	...	...	Los Angeles, Calif.	New York, N. Y.	General	...	...	...
Huguenot 7.	13	1.30	13	7.01	13	18.25	American	Richfield Oil Co.	...	...	...	Los Angeles, Calif.	New York, N. Y.	General	...	...	...

10 Beans, lentils, and nitrates.

11 For orders.

12 Motor ship.

13 Launch, towing 2 barges.

14 Tanker.

15 Lumber, lumber, and canned goods.

Ship	12	22	25	13	7	05	13	7	15	13	17	15	British	Donaldson Line	425	0	56	0	26	3	Vancouver, B. C.	Glasgow, Scotland	General	7,871	7,827	5,429
Sularia	12	17	40	13	7	47	13	13	18	55	13	18	55	Roosevelt S. S. Co., S. B.	409	6	54	2	22	0	Wyalla, Australia.	Baltimore, Md.	(+)	6,283	6,644	4,910
West	13	4	15	13	7	59	13	19	25	13	19	25	British	Clan Line Steamers	430	0	54	3	24	0	Calcutta, India.	Liverpool, England	(+)	6,170	6,652	4,683
Louisauek	12	21	45	13	12	54	13	20	50	13	23	40	American	Roosevelt S. S. Co., S. B.	457	0	56	3	19	0	Iloilo, P. I.	New York, N. Y.	(+)	5,442	8,315	6,100
Clan Ross	13	13	00	13	12	59	13	21	05	13	21	05	American	Pacific-Atlantic S. S. Co.	376	4	52	3	21	0	Aberdeen, Wash.	Baltimore, Md.		4,210	5,455	3,879
Archer	13	13	00	13	12	59	13	21	05	13	21	05	American	Pacific-Atlantic S. S. Co.	376	4	52	3	21	0	Aberdeen, Wash.	Baltimore, Md.		4,210	5,455	3,879
San Diego	13	13	15	13	14	20	13	21	35	13	21	35	American	Argonaut S. S. Co.	404	6	53	9	25	0	Seattle, Wash.	Baltimore, Md.		6,312	6,755	4,750
Charles H.	13	7	00	14	6	19	14	13	15	15	7	10	American	Panama Mail S. S. Co.	380	0	48	7	19	0	San Francisco, Cal.	New York, N. Y.		2,923	6,015	4,281
Crump	14	1	10	14	6	47	14	14	40	14	14	40	American	Tidewater Oil Co.	424	4	58	2	26	0	Los Angeles, Calif.	New York, N. Y.		9,288	7,333	5,183
Samuel Q.	14	18	45	14	19	38	15	11	40	16	2	40	German	Knorr & Burchard	279	6	40	8	20	0	Yavros, Mexico.	Billbao, Spain.		2,750	2,221	1,469
Flotbeck	14	14	40	15	6	20	15	13	00	16	12	05	American	United Fruit Co.	315	2	44	2	19	0	San Francisco, Cal.	Cristobal, C. Z.	(+)	657	3,496	2,141
San Mateo	14	22	05	15	6	57	15	14	15	15	14	15	American	Arrow Line	410	0	54	2	25	0	Portland, Oreg.	New York, N. Y.		7,190	6,579	4,810
Dorothy	14	22	15	15	7	17	15	15	15	15	15	15	American	Amer.-Hawaiian Line	471	2	59	1	21	2	Seattle, Wash.	Boston, Mass.		4,481	9,032	6,638
Nebraska	15	6	00	15	7	58	15	15	30	15	17	00	German	F. Laeisz	450	7	57	2	23	0	Valparaiso, Chile	Azores		8,580	7,409	5,234
Planet	15	10	35	15	11	12	15	18	15	15	18	15	American	Argonaut S. S. Co.	434	3	52	2	25	0	Longview, Wash.	Baltimore, Md.		8,495	7,935	5,841
Lancaster	15	8	20	16	6	25	16	14	45	17	11	18	British	Pacific Steam Nav. Co.	399	1	57	2	25	0	Valparaiso, Chile	Havre, France		5,850	6,750	4,840
Lautaro	15	4	29	16	6	25	16	14	45	17	11	18	British	Pacific Steam Nav. Co.	399	1	57	2	25	0	Valparaiso, Chile	Havre, France		5,850	6,750	4,840
Atlantic	15	21	00	16	6	51	16	17	16	16	16	16	American	Argonaut S. S. Co.	415	0	54	3	24	0	Kakuli, T. H.	New Orleans, La.		7,508	6,567	4,917
S. C. T. Dodd	16	5	00	16	7	06	16	17	15	16	17	15	American	Standard Oil Co. of Cal.	420	5	57	2	28	0	Panama, C.	Panama, C.		9,194	7,481	4,975
San Carlos	16	6	15	16	8	00	16	18	30	17	00	10	American	Grace Line	483	3	63	9	25	0	Valparaiso, Chile	New York, N. Y.		3,422	11,680	7,442
San Carlos	16	6	15	16	8	00	16	18	30	17	00	10	American	Grace Line	483	3	63	9	25	0	Valparaiso, Chile	New York, N. Y.		3,422	11,680	7,442
Meton	16	6	45	16	8	53	16	18	38	16	18	38	American	Penn. Shipping Co.	425	8	57	0	26	0	Los Angeles, Calif.	Baltimore, Md.		9,200	7,484	5,212
Chetopa	16	22	40	16	9	17	16	18	38	16	18	38	American	Charles Nelson & Co.	324	0	46	2	22	0	San Francisco, Cal.	New Orleans, La.		4,600	3,984	2,628
Point Arena	16	4	00	16	9	25	16	18	42	16	18	42	American	Swayne & Hoyt	324	0	46	2	22	0	San Francisco, Cal.	New Orleans, La.		3,655	3,984	2,612
Pacific Pine	16	11	30	16	12	16	16	20	10	16	22	40	American	Dimon S. S. Corp.	410	5	54	3	25	0	Seattle, Wash.	Norfolk, Va.		6,936	6,563	4,808
Delight	16	13	25	16	14	02	16	21	15	16	21	15	American	Redwood Line, Inc.	379	9	53	1	23	0	Seattle, Wash.	New Orleans, La.		6,014	5,667	4,103

* Tanker.

13 Manganese ore, lumber, and general.

14 Sugar, lumber, and molasses.

15 General, gasoline, and explosives.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

ARRIVALS.				DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 10	Wauna	Standard Fruit & S. S. Co.	Pto. Cabezas, Nicaragua.	August 10	No. 9670 ¹⁶	Pan American Airways.	San Salvador via waypoints.
August 10	Calamarc	United Fruit Co.	Port Limon, Costa Rica.	August 10	Magdalena	Hamburg-American Line.	Hamburg via waypoints.
August 10	No. 300-N ¹⁶	Pan American Airways	Talara via waypoints.	August 10	Calamarc	United Fruit Co.	New York via Habana.
August 10	Inapaquina ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.	August 10	Paraimina	United Fruit Co.	New Orleans and waypoints.
August 10	Annetta I. ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.	August 10	No. 9137 ¹⁶	Pan American Airways	Miami via waypoints.
August 11	Tolca	United Fruit Co.	New York via Habana.	August 11	Inapaquina ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.
August 11	No. 9185 ¹⁶	Pan American Airways	San Salvador via waypoints	August 11	Annetta I. ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.
August 11	Darien C-35 ¹⁶	Scandia Airplane Co.	Barraquilla and waypoints	August 11	Tolca	United Fruit Co.	Port Limon and Bocas.
August 12	Dramatist	T. & J. Harrison	Liverpool via waypoints.	August 11	Wauna	Standard Fruit & S. S. Co.	Pto. Cabezas, Nicaragua.
August 12	Van Rensselaer	Royal Netherlands S. S. Co.	Austerdam via waypoints.	August 11	Wauna	G. I. Bryan	Bluefields, Nicaragua.
August 12	No. 945-M ¹⁶	Royal Netherlands S. S. Co.	Talara via waypoints.	August 12	Pearl Marie ¹⁸	Van Rensselaer	Port Limon, Costa Rica.
August 12	Pearl Marie ¹⁸	Colon, Rep. of Panama.	Colon, Rep. of Panama.	August 13	Dramatist	T. & J. Harrison	New Orleans, La.
August 12	Anachucuna ¹⁷	G. I. Bryan.	Colon, Rep. of Panama.	August 13	Cavina	Elders & Fyfes Line.	Avonmouth via waypoints.
August 12	Anachucuna ¹⁷	United Fruit Co.	Colon, Rep. of Panama.	August 13	Tolca	United Fruit Co.	Port Limon, Costa Rica.
August 13	Cavina	Elders & Fyfes Line.	Avonmouth via waypoints.				

* Other than ships passing through the Canal.

16 Air mail carrier.

17 Motor boat.

18 Motor schooner.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 13	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.	August 13	V-311 ¹⁹	J. W. Miller	San Andrea, Colombia.
August 13	Swiftlight	Shell Oil Co.	Curacao, D. W. I.	August 13	No. 9684 ²⁰	Pan American Airways	Pan Slavador and waypts.
August 13	Santa Marta.	United Fruit Co.	New York via Kingston.	August 13	No. 142-M ²⁰	Pan American Airways	Miami via wayports.
August 13	Irona.	United Fruit Co.	New Orleans, La.	August 14	Swiftlight	Shell Oil Co.	Curacao, D. W. I.
August 13	No. 9776 ²⁰	Pan American Airways	Miami via wayports.	August 14	No. 144-M ²⁰	Pan American Airways	Maracaibo and wayports.
August 13	No. 9670 ²⁰	Pan American Airways	San Salvador via waypts.	August 14	Santa Marta	United Fruit Co.	New York via wayports.
August 13	Bellasco.	Aluminium Line	Tampa via wayports.	August 14	Bellasco	Aluminium Line	Curacao, D. W. I.
August 13	H. H. Rogers.	Standard Shipping Co.	Baytown, Tex.	August 14	Irona.	United Fruit Co.	Pto. Colombia and waypts.
August 13	Maxwell Newball.	Maxwell Newball.	Cartagena, Colombia.	August 15	No. 9685 ²⁰	Pan American Airways	San Salvador and waypts.
August 14	Passero.	Gough Brothers	Port Limon, Costa Rica.	August 15	H. H. Rogers	Standard Shipping Co.	Cartagena, Colombia.
August 14	Daytonian.	Leyland S. S. Line	Gienuegos, Cuba.	August 15	Daytonian.	Leyland S. S. Line	Santa Marta, Colombia.
August 14	Bogota.	Colombian S. S. Line	New York via wayports.	August 15	Bogota	Colombian S. S. Line	New York, N. Y.
August 14	Manuel Armas.	Spanish Line	Barcelona and wayports.	August 15	C. C. Acme ²¹	Maxwell Newball	Colon, Rep. of Panama.
August 15	Atlantida.	Standard Fruit & S. S. Co.	New Orleans, La.	August 15	Darien C-35 ²⁰	Seadta Airplane Co.	Barranquilla and waypts.
August 15	Van Renslaer	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	August 15	Inapaquina ¹⁹	A. Tagaropulos	Colon, Rep. of Panama.
August 15	Tela.	United Fruit Co.	Bocas, Rep. of Panama.	August 15	Annetta I. ¹⁹	A. Tagaropulos	Colon, Rep. of Panama.
August 15	Inapaquina ¹⁹	A. Tagaropulos	Colon, Rep. of Panama.	August 16	Tela	United Fruit Co.	New Orleans and waypts.
August 16	Annetta I. ¹⁹	A. L. Surgeon	Colon, Rep. of Panama.	August 16	Van Renslaer	Royal Netherlands S. S. Co.	Amsterdam and waypts.
August 16	Nueva Espana ¹⁹	A. L. Surgeon	Colon, Rep. of Panama.	August 16	Atlantida	Standard Fruit & S. S. Co.	New Orleans and waypts.
August 16	No. 144-M ²¹	Dier & Garcia.	Colon, Rep. of Panama.	August 16	Manuel Armas	Spanish Line	Barcelona and wayports.
August 16	Heredia	Pan American Airways	Maracaibo via wayports.	August 16	Dora K. ²¹	A. L. Surgeon	Bluefields and Limon.
August 16	No. 132-M ²⁰	United Fruit Co.	New Orleans and Habana.	August 16	Nueva Espana ¹⁹	Dier & Garcia.	Colon, Rep. of Panama.
August 16	No. 9664 ²⁰	Pan American Airways	Miami via wayports.				
August 16	No. 300-N ²⁰	Pan American Airways	San Salvador and waypts.				
August 16			Talara via wayports.				
¹⁹ Motor boat. ²⁰ Air mail carrier. ²¹ Schooner.				PORT OF BALBOA.			
²² Motor ship.							
August 11	Montebello ¹	Union Oil Co. of Calif.	Los Angeles, Calif.	August 13	Real ²³	Hans Elliot.	Panama Bay, R. P.
August 12	Guardian.	All America Cables, Inc.	Callao, Peru.	August 13	Montebello ¹	Union Oil Co. of Calif.	Punatanes, Costa Rica.
August 14	Dos Hermanos ²³	A. Valdez.	Panama Bay, R. P.	August 16	Guardian.	All America Cables, Inc.	Panama Bay, R. P.
August 14	Sambu.	Hans Elliot.	Panama Bay, R. P.	August 14	Dos Hermanos ²³	A. Valdez.	Panama Bay, R. P.
August 15	Real ²³	Hans Elliot.	Panama Bay, R. P.	August 15	Sambu ²³	Hans Elliot.	Panama Bay, R. P.
				August 15	Real ²³	Hans Elliot.	Panama Bay, R. P.
				August 17	Locuna ¹	Imperial Oil Co., Ltd.	Talara, Peru.
¹ Tanker. ²³ Motor schooner.				* Other than ships passing through the Canal.			

Cargo Through the Canal During July, 1930.

On pages 34 and 35 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in July, 1930. This cargo, segregated according to direction, as compared with July, 1929, and the differences, is shown in the following tabulation:

	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	909,976	575,964	-334,012
Pacific to Atlantic.....	1,688,186	1,826,083	+137,897
Total.....	2,598,162	2,402,047	-196,115

It will be noted from the above that the Atlantic to Pacific tonnage decreased 334,012 tons, or 36.7 per cent, as compared with July, 1929, and that from the Pacific to Atlantic increased 137,897 tons, or 8.2 per cent, making a total decrease of cargo tonnage in both directions of 196,115 tons, or 7.5 per cent. The heavy decrease from the Atlantic was accounted for by curtailment in shipments of several important commodities as indicated under "Principal commodities," most notably manufactured iron and steel, mineral oils, and cement. The increase from the Pacific was due to large gains in mineral oils, iron ore, wheat, and cold storage cargo, offset to a large extent by decreases in lumber, nitrates, and metals.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-four and one-tenth per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23.6 per cent in Europe. Tonnage from the United States decreased 237,032 tons, or 38.1 per cent, as compared with July, 1929, and the proportion to the total in July, 1930, was slightly lower. The amount originating in Europe decreased 102,348 tons, or 42.9 per cent, and the percentage of the whole was lower in July of this year.

Destination.—Forty-four and four-tenths of the Pacific-bound tonnage was destined to the United States; 14.4 per cent to South America; 20.7 per cent to Asia; and 11.5 per cent to Australasia. Cargo tonnage to all these areas declined as compared with July, 1929, in actual tonnage as follows: To the United States, 182,975, or 41.7 per cent; to South America, 49,369, or 37.2 per cent; to Australasia, 57,799, or 46.7 per cent, and to Asia, 48,560 tons, or 29.0 per cent. In point of the relation of cargo destined to the aforementioned areas to the total tonnage in this direction, that to the United States, South America, and Australasia decreased, while that to Asia showed a gain.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 58.4 per cent came from the United States; 22.1 per cent from South America; 8.9 per cent from Canada; 5.9 per cent from Asia; and 3.8 per cent from Australasia. As compared with the corresponding month a year ago, tonnage from the United States increased 121,794 tons, or 12.9 per cent, and the percentage of the total was higher in July, 1930. Cargo tonnage from South America decreased 28,122 tons, or 6.5 per cent, and also showed a reduced percentage in its relation to the total cargo.

Tonnage from Canada increased 22,298 tons, or 14.9 per cent, with an increase in the percentage of the total. Asia showed a cargo decrease of 2,593 tons, or 2.4 per cent, while Australasia showed an increase of 24,130 tons, or 54.2 per cent. Asia showed a decrease in its percentage of the total cargo and Australasia an increase. The increase in cargo tonnage from the United States was principally due to mineral oils. The decrease from South America was caused by lessened nitrate shipments. The gain from Canada was due to wheat shipments and that from Australasia to shipments of iron ore from Australasia to the east coast of the United States, and an increase in cold storage cargo from New Zealand.

Destination.—Segregated according to destination, 59.8 per cent of the cargo in this direction went to the United States, and 32.5 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage, but showed an increase in actual tonnage of 48,630 tons, or 4.7 per cent. That to Europe increased 45,294 tons, or 8.3 per cent, while its relation to the total cargo remained the same.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 82.5 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 17.5 per cent consists, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities, which aggregated more than 10,000 tons for July, 1929, or July, 1930, are listed in the following tabulation, showing differences:

Commodity.	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	12,368	3,165	-9,203
Automobiles.....	22,881	11,296	-11,585
Cement.....	38,331	16,773	-21,558
Coal and coke.....	23,637	12,331	-11,306
Cotton.....	10,559	4,629	-5,930
Manufactured goods:			
Iron and steel.....	230,916	108,973	-121,943
Machinery.....	14,979	10,720	-4,259
Railroad material.....	29,294	8,082	-21,212
Textiles.....	11,948	6,099	-5,849
Tinplate.....	15,555	15,257	-298
Miscellaneous.....	15,492	7,320	-8,172
Metal, scrap (principally iron).....	8,318	20,029	+11,711
Oils, mineral.....	62,050	37,323	-24,727
Paper.....	22,038	17,483	-4,555
Phosphates.....	32,638	23,771	-8,867
Sugar.....	15,108	14,895	-213
Sulphur.....	29,485	15,662	-13,823

The above 17 commodity groups comprise 58.0 per cent of the cargo moving from the Atlantic to the Pacific during July, 1930. All of the items except scrap metal show decreases as compared with July, 1929. The largest decline was in manufactured iron and steel.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.6 per cent of all cargo moving from the Pacific to Atlantic during the month of July, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	July, 1929.	July, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	24,625	13,958	-10,667
Canned goods (fish, fruit, vegetables, etc.).....	38,527	44,254	+5,727
Cold storage (food products).....	18,306	34,331	+16,025
Lumber.....	348,814	279,522	-69,292
Metals, various.....	58,560	41,040	-17,520
Nitrates.....	143,664	64,204	-79,460
Oils, mineral.....	455,333	689,753	+234,420
Ores (principally iron).....	173,437	220,492	+47,055
Pulp.....	10,053	8,047	-2,006
Rice.....	10,993	12,248	+1,255
Sugar.....	113,644	111,628	-2,016
Wheat.....	107,888	134,285	+26,397
Wool.....	10,497	15,919	+5,422

* Fresh fruit not included.

The above 13 commodity groups comprise 91.4 per cent of the cargo moving from the Pacific to the Atlantic during July, 1930. Seven of the items show increases and 6 decreases. Mineral oils, iron ores, and wheat showed the greatest increases, while lumber, nitrates, and metals decreased heavily.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 9, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Barbara.....	Grace Line.....	August 3.....	August 3.....		233
Cristobal.....	Panama R. R. S. S. Line.....	August 3.....	August 3.....		978
Ludwigshafen.....	North German Lloyd.....	August 3.....	August 3.....		192
Zenon.....	French Line.....	August 3.....	August 3.....		62
Cartago.....	United Fruit Co.....	August 3.....	August 3.....		72
Cerigo.....	Hamburg-American Line.....	August 3.....	August 3.....		205
Ulua.....	United Fruit Co.....	August 3.....	August 3.....	35	71
Cauca.....	National Navigation Co.....	August 3.....	August 3.....	78	
Durazzo.....	Hamburg-American Line.....	August 3.....	August 3.....	566	
Australien.....	Danish-East Asiatic Co.....	August 3.....	August 3.....	245	307
Dorelian.....	Leyland S. S. Line.....	August 3.....	August 4.....	665	(²)
Baralt.....	Royal Netherlands S. S. Co.....	August 4.....	August 4.....		54
Los Angeles.....	Hamburg-American Line.....	August 4.....	August 4.....		667
Barneveld.....	Royal Netherlands S. S. Co.....	August 4.....	August 5.....	130	72
Baarn.....	Royal Netherlands S. S. Co.....	August 4.....	August 5.....	223	66 ¹
Calamares.....	United Fruit Co.....	August 4.....	August 6.....	594	15
Santa Teresa.....	Grace Line.....	August 5.....	August 5.....	112	(⁴)
Annie Johnson.....	Johnson S. S. Line.....	August 5.....	August 6.....	(²)	257
Wiegand.....	North German Lloyd.....	August 5.....	August 6.....	240	51
Magdalena.....	Hamburg-American Line.....	August 5.....	August 6.....	65	(²)
Theo. Roosevelt.....	Fred Olsen Line.....	August 5.....	August 6.....	(²)	72
Tela.....	United Fruit Co.....	August 6.....	August 6.....	566	22 ¹ / ₂
Teno.....	Chilean Line.....	August 6.....	August 6.....	54	(²)
San Felipe.....	States S. S. Co.....	August 6.....	August 6.....	5	(²)
Santa Maria.....	Grace Line.....	August 6.....	August 6.....	97	103
Zacapa.....	United Fruit Co.....	August 6.....	August 7.....	245	88
Swiftwind.....	C. D. Mallory & Co.....	August 6.....	August 7.....	11,079	(²)
Alemania.....	Hamburg-American Line.....	August 7.....	August 7.....		60
Castilla.....	United Fruit Co.....	August 6.....	August 9.....	29	272
Cid.....	Pacific Steam Navigation Co.....	August 7.....	August 7.....	103	(²)
Nosa Queen.....	N. O. & S. A. S. S. Co.....	August 7.....	August 8.....	244	154 ¹ / ₂
Baracoa.....	Colombian Line.....	August 7.....	August 8.....	152	295
Pellerin de la Touche.....	French Line.....	August 7.....	August 9.....	124	438
Acajutla.....	Pacific Steam Navigation Co.....	August 8.....	August 8.....		1,026
Amapala.....	Standard Fruit S. S. Co.....	August 8.....	August 9.....	182	388
Manizales.....	North German Lloyd.....	August 8.....	August 9.....	718	
Salvador.....	Pacific Steam Navigation Co.....	August 8.....	August 9.....	205	
Washington.....	French Line.....	August 9.....	August 9.....	33	
Tela.....	United Fruit Co.....	August 9.....	August 9.....	(²)	
Hague Maru.....	Osaka Shosen Kaisha.....	August 9.....	August 9.....	71	(²)
Chas. E. Harwood.....	Huasteca Petroleum Co.....	August 9.....	August 9.....	1,259	
Parismina.....	United Fruit Co.....	August 9.....	August 9.....	76	

* No cargo discharged

* No cargo laded.

* 40 pounds.

* 2 packages.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, July, 1930.—Continued from page 33.
(Figures represent tons of 2,240 pounds.)

From —	North America.					South America.					AUSTRALASIA.			Asia.			Grand total.	Per cent of total cargo.						
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ¹	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ²	Total, South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.			Philippine Islands.	China.	Japan.	Far East. ¹	Total, Asia.	
NORTH AMERICA:																								
UNITED STATES:																								
North Atlantic ports	167,705	1,672	2,619	154,3	7,220	175,870	10,952	704	421	4,453	3,340	19,870	11,153	7,029	475	18,657	9,818	12,546	19,022	16,383	57,775	272,172	47.3	
South Atlantic ports	2,901					2,901														10,114	946	11,060	13,951	2.4
Gulf ports	36,490	60		114		36,664	2,467	271	460	704	79	3,981	3,025			3,025	1,690	9,845	27,887		39,431	83,101	14.4	
Total, United States	207,096	1,732	2,619	268,3	7,220	215,435	13,419	975	881	5,157	3,419	23,851	14,178	7,029	475	21,682	11,517	22,391	57,023	17,335	108,266	369,234	64.1	
East coast of Canada:																								
East coast of Central America	8,934	175				9,109							2,670	3,671		6,341		2,862			2,862	18,312	3.2	
Costobal, C. Z. ¹	3,745	183	5,329	30		9,287	1,191	746	901	987	456	4,281	4,500			4,500					4,500	9.3		
West Indies	129	7,341				7,461	167					167		7,290		7,290						14,918	2.6	
Total, North America	210,961	18,190	8,123	298,3	7,220	241,292	14,777	1,721	1,782	6,144	3,875	28,299	21,348	17,990	475	39,813	11,517	25,253	57,023	17,335	111,128	423,532	73.0	
Europe:																								
British Isles	4,111	4,074		21		8,206	9,110	118	355	4,074	4,454	18,111		26,167		26,167				7,800	7,800	60,284	10.5	
Belgium	5,226	1,267	1,740			8,233	100		6	15	1,800	1,906										10,139	1.8	
Denmark	2,640	200	316			3,156																2,561	0.4	
France	2,389	117	47			2,553	18		36	43	3,410	3,509										6,062	1.0	
Germany	4,604	857		16		5,457	381	45	6	398	278	1,108										6,045	1.1	
Holland	1,236	36				1,272	645	100	15	754	685	2,197										4,980	0.7	
Italy	4,238	36				4,241					2,000	4,000										12,244	2.0	
Norway and Sweden	4,233	153	2,343	1,082		8,201	2,000				2,000	4,000										12,201	2.1	
Spain and Portugal	4,233	1,016	280			5,529	30															5,559	0.9	
Europe ¹	4,915	1,601	1,484	7		8,007	2,938	389	241	1,395	19,307	24,270										32,377	5.7	
Total, Europe	30,285	9,328	6,210	1,226		46,949	15,222	652	659	6,681	31,932	55,146		26,167		26,167				7,800	7,800	136,062	23.6	
East coast of South America:																								
East coast of South America	14,110	5,199				19,308		62				62										19,370	3.4	
Grand total	255,356	32,716	14,333	1,424	3,720	307,549	29,999	2,435	2,441	12,825	35,807	53,507	21,348	14,157	475	65,980	11,517	25,253	57,023	17,335	118,028	575,964	100.0	
Per cent of total cargo:																								
July, 1930	44.4	5.7	2.5	0.2	0.6	53.4	5.2	0.4	0.4	2.2	6.2	14.4	3.7	7.7	0.1	11.5	2.0	4.4	9.9	4.4	20.7	100.0	.....
July, 1929	48.2	2.8	1.6	0.2	0.6	53.4	6.8	0.5	0.8	2.4	4.1	14.6	4.8	8.8	0.1	13.6	2.0	3.6	9.5	3.3	18.4	100.0	.....
July, 1928	44.0	2.4	1.6	1.0	1.9	50.9	6.5	1.2	0.5	1.9	2.9	13.0	6.7	7.4	0.9	15.0	1.6	5.1	11.8	2.6	21.1	100.0	.....
General cargo not routed on as to allow segregation between definite ports.																								
Includes both local and transit cargo.																								

¹ Includes both local and transit cargo.

² General cargo not routed so as to allow segregation between definite ports.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, July, 1930.

(Figures represent tons of 2,240 pounds.)

From—	North America.							Europe.												Grand total.	Per cent of total cargo.			
	United States.				North America.			Europe.																
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z. ¹	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Union of Social- istic Soviet Republics.	Spain and Portugal.			Europe. ²	Total, Europe.	East coast of South America.	Egypt.
North America:																								
W. coast of U. S.	638,939	1,092	43,036	683,667		1015,058	49,567	748,302	176,662	2,218		18,262	3,426	10,904	165	1,400				99,064	312,101	8,057	1,068,460	58.4
W. coast Canada.	20,295			20,305	12,071	35	2,604	35,015	78,485	1,029	900	974	4,753	7,549	100	7,786				25,922	127,489	777	163,281	8.9
W. coast of C. A.	20,849			20,849		25	2,276	2,836	36			42	340		39					153	610		3,446	0.2
Hawaiian Islands.	12,078			12,214				12,214															12,214	0.7
Total, N. A.	671,661	1,692	43,182	716,535	12,071	35,177	3,692	798,367	255,183	3,238	900	19,278	8,519	18,453	304	9,186				125,139	440,200	8,834	1,247,401	68.2
South America:																								
Chile.	207,017		1,795	208,812		389	1,845	211,046	16,527		15	1,772	8,478	54	273	584	20,845			27,765	76,313	10	287,369	15.8
Colombia.	1,492		48	1,540		3,469		5,009															5,009	0.3
Ecuador.	14,624			14,624		2,823		17,447	15		45	71		5	66	916					1,118	15	18,580	1.0
Peru.	29,307			29,307	28,319	188		57,814	4,619	78	2,373		11,596	2,174	50					8,621	29,511		87,325	4.7
West coast S. A.	2,068			2,068		1,580		3,648	91						142					1,264	1,497		5,145	0.3
Total, S. A.	254,508		1,843	256,351	28,319	8,449	1,845	294,964	21,252	78	2,433	1,843	20,079	2,294	1,381	584	20,845			37,650	108,439	25	403,428	22.1
Australasia:																								
Australia.	21,292			21,292	316			21,608															21,608	1.2
New Zealand.	828			828	2,360		28	3,216	40,137												40,137		43,353	2.4
Australasia.									21			3,686									3,707		3,707	0.2
Total Aust'lasia	22,120			22,120	2,676		28	24,824	40,158			3,686									43,844		68,668	3.8
Asia:																								
Philippine Islands	71,761	15,404		87,165				87,165															87,165	4.8
China.	6,086	165		6,251		1,341	7,200	14,792	850												850		15,642	0.8
Japan.	2,680			2,680		94		2,774															2,774	0.2
Far East.	817			1,005				1,005															1,005	0.1
Total, Asia.	81,344	15,757		97,101		1,435	7,200	105,736	850												850		106,586	5.9
Grand total.	1,029,633	1,692	80,782	1,092,107	43,066	35,271	281,614	1,223,891	317,443	3,316	3,333	24,807	28,598	20,747	1,685	9,770	20,845			162,789	593,333	8,859	1,826,083	100.0
Per cent of total cargo:																								
July, 1930.	56.4	0.1	3.3	59.8	2.3		1.5	3.4	67.0	17.3	0.2	0.2	1.3	1.5	1.1	0.1	0.5	1.4		8.9	32.5	0.5	100.0	.....
July, 1929.	54.4	1.2	6.2	61.8	2.2		0.6	2.2	66.8	16.7	1.2	0.1	1.3	1.7	0.7	0.3	0.1	.....	0.4	10.0	32.5	0.2	100.0	.....
July, 1928.	56.4	1.0	2.9	60.3	2.7	0.8	1.6	1.5	66.9	17.2	1.9	0.1	1.3	2.4	0.8	0.2	0.7	.....	0.4	6.9	31.9	0.2	100.0	.....

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

United States Intercoastal Traffic by Commodities for July, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for July, 1930, and the totals for July, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	465	97	562
Alfalfa.....		304	304
Alfalfa meal.....		583	583
Ammonia.....	25		25
Automobiles.....	3,787	120	3,907
Automobile accessories.....	885	167	1,052
Bark:			
Cascara.....		53	53
Other.....		384	384
Barley.....		22	22
Beans.....		1,541	1,541
Borax.....	77	1,413	1,490
Bricks.....	100		100
Burlap.....	21	42	63
Calcium carbide.....	60		60
Camphor.....		23	23
Canned:			
Fish.....	165	9,301	9,466
Fruit.....	277	15,110	15,387
Meat.....	92	492	584
Milk.....	25	15	40
Soup.....	969	16	985
Vegetables.....	269	3,431	3,700
Miscellaneous.....	2,186	4,291	6,477
Carbon black.....	12	103	115
Celite filtercal.....		586	586
Cement.....	449	8	457
Chalk.....	32		32
Charcoal.....	76		76
Chemicals.....	2,981	305	3,286
China and fire clay.....	89		89
Coal.....	1,800		1,800
Cocoa.....	60	10	70
Coconuts.....	40	552	592
Coffee.....	405	140	545
Coke.....	1,970		1,970
Cold storage:			
Beef.....	17		17
Butter.....	50		50
Eggs.....		110	110
Lard.....	50		50
Other.....	185		185
Confectionery.....	407		407
Copra.....		110	110
Cotton.....	421	1,043	1,464
Cottonseed meal.....		742	742
Cyanide.....	20		20
Drugs.....	1,506	6	1,512
Dyes.....	318		318
Earthenware.....	45	169	214
Eggs, dried.....		199	199
Fertilizer.....	33		33
Flour.....	300	4,268	4,568
Fruit:			
Dried.....	9	4,395	4,404
Fresh.....		796	796
Fullers earth.....	76	55	131
Furniture.....	520	111	631
General.....	42,119	16,525	58,644
Glass and glassware.....	2,596	201	2,797
Glue.....	63	13	76
Granite.....	25		25
Graphite.....	71		71
Gum.....		71	71
Hair.....		167	167

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Hardwoods.....	693	782	1,475
Hay.....		1,169	1,169
Hemp.....		1,472	1,472
Honey.....	18	46	64
Hops.....		105	105
Ink.....	22		22
Jute.....	148		148
Lard substitute.....	1,795	14	1,809
Leather.....	69		69
Lime.....	29		29
Linoleum.....	209	57	266
Liquors.....	105	13	119
Lumber.....	6,609	155,867	162,476
Malt.....	295		295
Manufactured goods:			
Iron and steel.....	68,719	1,264	69,983
Machinery.....	2,228	763	2,991
Railroad material.....	85	71	156
Tinplate.....	8,259	1	8,260
Textiles.....	3,826	78	3,904
Miscellaneous.....	3,471	1,115	4,586
Matches.....	204	12	216
Metals:			
Copper.....	32	4,703	4,735
Iron.....	1,477	400	1,877
Lead.....	25		25
Scrap.....	279	706	985
Tin.....		5	5
Zinc.....	18	244	262
Other.....	87		87
Milk, powdered.....	18	204	222
Molasses.....	38		38
Musical instruments.....	12		12
Nitrates.....	271		271
Nuts.....		15	15
Oats.....	40		40
Oils:			
Coconut.....		12	12
Cottonseed.....	34		34
Crude.....	452		452
Gas oil, fuel oil.....	13	56,662	56,665
Gasoline, benzine, naphtha.....	29	332,958	332,987
Kerosene.....	17		17
Lubricating and greases.....	4,925	1,202	6,127
Vegetable.....	753	2	755
Wood.....	20		20
Other.....	261	60	321
Ores:			
Copper.....		300	300
Magnesite.....		109	109
Manganese.....	75	55	130
Zinc.....	14	950	964
Other.....	30	308	338
Paint.....	860	14	874
Paper.....	5,270	8,715	13,985
Paper pulp.....	32	7,352	7,384
Paper roofing.....	52		52
Peanuts.....	666	246	912
Peas.....	27	192	219
Phosphates.....	1,114	1,365	2,479
Porcelain.....	289		289
Rags.....	10	328	338
Rice.....	69	220	289
Rope.....	150	90	240
Rosin.....	647		647
Rubber:			
Manufactured.....	1,486	77	1,563
Scrap.....		59	59
Salt.....	324		324
Sand.....	2,200		2,200
Seeds:			
Hemp.....		30	30
Other.....		82	82
Shells.....	849		849
Silk.....		843	843
Skins and hides.....		1,710	1,710
Slag.....	1,791		1,791
Slate.....	221		221
Soap.....	2,268	95	2,363
Soda.....	116		116
Soda ash.....	1,712		1,712
Soda, bicarbonate.....	169		169
Soda, caustic.....	93		93
Sugar.....		20,363	20,363
Sulphur.....	12,590		12,590

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Syrup.....	33		33
Talc.....		226	226
Tallow.....		170	170
Tar.....	136		136
Tobacco.....	1,814	50	1,864
Toys.....	55		55
Turpentine.....	93		93
Vegetables.....		756	756
Waste.....	45	33	78
Wax.....	55	24	79
Wheat.....		68	68
Wine.....		22	22
Wool.....	7	10,733	10,740
Total, July, 1930.....	207,096	683,667	890,763
Total, July, 1929.....	336,019	642,384	978,403
Total, July, 1928.....	245,433	633,488	878,921

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 19, 1930.

No. 736.

The following was received in a letter addressed to the Governor of The Panama Canal:

A new lighthouse has been established on La Plata Island in the same position as the old one but with an increased visibility. Characteristics of light are as follows:

Period, 7 seconds; flash 0.7 second, eclipse 6.3 seconds. Range, 16.6 miles; in clear weather, 30 miles.

Position, latitude 1° 15' 50" S., longitude 81° 06' 00" W.

Light is situated on N. W. end and summit of island.

(Signed.) C. E. ALFARO,
Ecuadorian Legation.

(NOTE.—Color of light was not given.)

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending August 16, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Teresa.....	Grace Line.....	August 4.....	August 5.....	4	
Rangitane.....	New Zealand Shipping Co.....	August 5.....	August 6.....	17	
Barneveld.....	Royal Netherlands S. S. Co.....	August 5.....	August 6.....	115	
Vega.....	U. S. Government.....	August 7.....	August 7.....	47	
Virginia.....	Panama-Pacific Line.....	August 8.....	August 8.....		168
Saramacca.....	United Fruit Co.....	August 8.....	August 9.....	523	9
Salvador.....	Pacific Steam Navigation Co.....	August 9.....	August 9.....	2	
President Harrison.....	Dollar Line.....	August 10.....	August 10.....	13	3
Charles E. Harwood.....	Huasteca Petroleum Co.....	August 10.....	August 12.....	2,835	
Montebello.....	Union Oil Co.....	August 11.....	August 12.....	11,850	19
Santa Inez.....	Grace Line.....	August 12.....	August 12.....	8	1
Guatemala.....	Panama Mail S. S. Co.....	August 12.....	August 13.....	62	3
Archer.....	Roosevelt S. S. Co.....	August 12.....	August 13.....	284	
Lagarto.....	Pacific Steam Navigation Co.....	August 12.....	August 12.....		50
Colombia.....	Panama Mail S. S. Co.....	August 13.....	August 14.....	76	
San Mateo.....	United Fruit Co.....	August 14.....	August 15.....	141	61

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average tempera- ture. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.....	August 19....	August 24....	August 27....	August 31....	September 3..	September 8.
Ancon.....	September 3..	September 8..	September 11.	September 15.	September 18.	September 23.
Cristobal.....	September 16..	September 21.	September 24.	September 28.	October 1....	October 6.
Ancon.....	September 30..	October 5....	October 8.....	October 12....	October 15....	October 20.
Cristobal.....	October 15....	October 20....	October 23....	October 28....	October 31....	November 5.
Ancon.....	October 28....	November 2..	November 5..	November 9..	November 12.	November 17.
Cristobal.....	November 11..	November 16.	November 19.	November 23.	November 26.	December 1.
Ancon.....	November 25..	November 30.	December 3..	December 7..	December 10..	December 15.
Cristobal.....	December 9...	December 14..	December 17..	December 21..	December 24..	December 29.
Ancon.....	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

* Effective April 30, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure after S. S. *Cristobal*, Sept. 16th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m. 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m. 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 14, White, male, G. U.....	
Section "D:"	
Ward 15, American, male (surgical).....	Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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Certificate.—By direction of the Governor of the Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., August 27, 1930. No. 4.

CANAL WORK IN JULY, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of July, 1930.

BALBOA HEIGHTS, C. Z., August 21, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of July, 1930:

NUMBER OF TRANSITS.

During the month, 488 commercial vessels and 10 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 33 vessels belonging to the United States Government, and 2 transits of Panamanian Government vessels, on which no tolls were collected, making a total of 533 transits for the month, or a daily average of 17.19.

Tolls on the 488 commercial vessels amounted to \$2,180,511.82, and on the launches to \$64.95, a total of \$2,180,576.77, or a daily average on all traffic of \$70,341.19.

Commercial traffic for the past month as compared with June, 1930, shows an increase of 10 transits and \$79,517.29 in tolls, and in comparison with the traffic in July, 1929, a decrease of 39 transits and \$79,070.55 in tolls. Traffic in the first 7 months of the current calendar year has fallen off to the extent of 284 transits and \$594,831.43 in tolls, in comparison with the corresponding period last year.

The total numbers of craft of all kinds transiting the Canal during the month of July, 1930, as compared with the same month in 1929 and 1928, are shown in the following tabulation:

	July, 1930.	July, 1929.	July, 1928.
Commercial vessels.....	488	527	509
Launches (under 20 tons).....	10	4	10
Noncommercial vessels:			
United States Government.....	33	44	28
Panamanian Government.....	2	2	3
For repairs.....		10	8
Total.....	533	587	558

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	8	8	16
Pedro Miguel.....	23	27	50
Miraflores.....	27	30	57
Total.....	58	65	123

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1930 to the end of July, 1930, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,496	2,377,900	2,211,961.20	2,131,386.12
March.....	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
Total...	3,755	3,471	17,573,563	17,171,603	18,431,772	16,815,396	16,023,664.05	15,428,767.87

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for July, 1930, as compared with the corresponding month in 1929 and 1928, and the monthly averages for the fiscal year 1930:

	July, 1930.	July, 1929.	July, 1928.	Average per month for fiscal year 1930.
Number of vessels.....	488	527	509	515
Panama Canal net tonnage.....	2,438,895	2,468,280	2,318,395	2,498,385
United States net tonnage.....	1,827,188	1,907,298	1,771,887	1,890,255
Registered gross tonnage.....	3,030,107	3,118,081	2,922,904	3,119,221
Registered net tonnage.....	1,842,382	1,909,588	1,781,824	1,899,802
Tolls.....	\$2,180,511.82	\$2,259,582.37	\$2,109,083.19	\$2,256,407.50
Tons of cargo carried.....	2,402,047	2,598,162	2,291,955	2,502,619

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	July, 1930.	July, 1929.	July, 1928.	
Number of transits.....	15.74	17.00	16.41	16.95
Panama Canal net tonnage.....	78,674	79,622	74,787	82,139
Tolls.....	\$70,339.09	\$72,889.75	\$68,034.94	\$74,133.26
Tons of cargo carried.....	77,485	83,812	73,934	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of July, 1930, as compared with July, 1929 and 1928, are shown in the following tabulation:

	Average per vessel.		
	July, 1930.	July, 1929.	July, 1928.
Panama Canal net tonnage.....	4,998	4,684	4,554
United States net tonnage.....	3,744	3,619	3,481
Registered gross tonnage.....	6,209	5,917	5,742
Registered net tonnage.....	3,775	3,624	3,497
Tolls.....	\$4,468.26	\$4,287.63	\$4,143.58
Tons of cargo (including vessels in ballast).....	4,922	4,930	4,503
Tons of cargo (laden vessels only).....	5,802	5,878	5,431

NATIONALITY OF VESSELS.

Seventeen nationalities were represented in the commercial traffic passing through the Canal in July, 1930. Vessels of United States registry, with 240, led in the number of transits, while those of British registry, with 117, were second; vessels of these two nationalities made 73.2 per cent of the total transits for the month. Germany, Norway, and Japan were next with 30, 28, and 16 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of July, 1930, was 2,402,047 tons. Cargo from the Atlantic to the Pacific aggregated 575,964 tons, as compared with 699,652 tons in June, 1930, and 909,976 tons in July, 1929. From the Pacific to Atlantic there were 1,826,083 tons, as compared with 1,447,529 tons in June, 1930, and 1,688,186 tons in July, 1929.

From the Atlantic to Pacific, there was a decrease of 334,012 tons of cargo, or 36.7 per cent, as compared with July, 1929, caused by a decline in tonnages of practically all commodities, principally manufactured iron and steel. Various manufactured goods, totaling 156,451 tons, constituted the heaviest item of traffic in this direction, followed by mineral oils with 37,323 tons, phosphates with 23,771 tons, scrap metal with 20,029 tons, and paper with 17,483 tons.

From the Pacific to Atlantic, mineral oil shipments totaling 689,753 tons, were the heaviest item, followed by lumber with 279,522 tons, ores (principally iron) with 220,492 tons, wheat with 134,285 tons, and sugar with 111,628 tons.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.923 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.719 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of July, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,802.50	\$11,005.00	\$202.50	
British.....	548,746.40	597,750.20	49,003.80	
Chilean.....	8,623.75	9,377.00	753.25	
Colombian.....	901.85	783.00		118.85
Danish.....	32,769.48	33,915.40	1,145.92	
Danzig.....	17,415.19	15,666.20		1,748.99
Dutch.....	19,666.99	21,519.20	1,852.21	
French.....	50,025.95	52,386.00	2,360.05	
German.....	91,843.88	107,084.40	15,240.52	
Greek.....	3,295.00	4,099.00	804.00	
Italian.....	27,891.65	33,345.00	5,453.35	
Japanese.....	85,326.25	80,830.00		4,496.25
Norwegian.....	106,005.62	117,968.60	11,962.98	
Panamanian.....	12,166.05	13,492.20	1,326.15	
Swedish.....	29,298.37	30,990.60	1,692.23	
United States.....	1,131,644.14	1,166,424.00	34,779.86	
Yugoslav.....	4,088.75	4,570.00	481.25	
Total.....	2,180,511.82	2,301,205.80	127,058.07	6,364.09
Net increase for all traffic.....			120,693.98	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$24,227.67
United States foreign trade.....	9,197.44
United States—Canal Zone trade.....	1,354.75
Net increase.....	34,779.86

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement of vessels transiting the Panama Canal in July, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.59	1.59
British.....	.70	1.27	1.04
Chilean.....	.50	.70	.60
Colombian.....	1.51	1.43	1.48
Danish.....	1.11	1.17	1.15
Danzig.....		1.95	1.95
Dutch.....	.78	1.42	1.09
French.....	.49	1.28	1.01
German.....	.73	1.25	1.00
Greek.....		1.73	1.73
Italian.....	.41	.45	.44
Japanese.....	1.21	1.40	1.31
Norwegian.....	.88	1.62	1.36
Panamanian.....	.64	1.14	1.14
Swedish.....	.83	2.87	2.48
United States.....	.68	1.46	1.16
Yugoslav.....		1.78	1.78
Averages, July, 1930.....	.72	1.40	1.15
Averages, July, 1929.....	.98	1.45	1.25
Averages, July, 1928.....	.82	1.49	1.18

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of July is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....				69	375,067	\$385,446.00
Ballast.....	51	281,690	\$202,949.10			
General cargo ships:						
Laden.....	163	796,468	707,763.25	182	922,937	839,645.85
Ballast.....	14	51,713	36,682.80	5	10,933	7,961.43
Noncargo-carrying ships:						
Yachts.....	2	45	33.15	2	42	30.24
Total.....	230	1,129,916	947,428.30	258	1,308,979	1,233,083.52
Method of propulsion:						
Steam.....	161	799,357	693,689.72	190	936,008	899,405.28
Motor.....	65	330,129	253,327.08	66	372,607	333,405.90
Motor schooner.....	2	218	252.50	2	364	272.34
Nonpropelled.....	2	212	159.00			
Total.....	230	1,129,916	947,428.30	258	1,308,979	1,233,083.52

Of the 351 steam-driven vessels, 273 were oil burning, 77 coal burning, and 1 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of July, 1930. If the tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated.

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Battleships.....	1	² 32,000	\$16,000.00			
Cruisers.....	1	² 3,200	1,600.00	1	² 3,200	\$1,600.00
Cutters.....	1	² 10	500			
Gunboats.....	2	² 3,150	1,575.00			
Minesweepers.....	1	² 950	475.00			
Motor sailors.....	1	² 10	5.00			
Submarines.....	9	² 7,774	3,887.00	9	² 7,774	3,887.00
Supply ships.....	1	² 1,613	2,016.25			
U. S. Army vessels:						
Transports.....	2	² 7,816	9,770.00	4	² 14,770	18,462.50
Total, U. S. Government.....	19		35,333.25	14		23,949.50
Panamanian Government vessels:						
Transports.....	1	² 101	72.72			
Yachts.....				1	² 20	10.00
Grand total.....	20		35,405.97	15		23,959.50

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of July, 1930, carried cargo as follows: Atlantic to Pacific, 1,423 tons; Pacific to Atlantic, 737 tons; total 2,160 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of July, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	56	\$50.10
Pacific to Atlantic.....	2	18	14.85
Total.....	10	74	64.95

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of July, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	62,928	36,698	99,626
Local cargo shipped..... tons..	6,210	744	6,954
Transit cargo arriving..... tons..	2,357,017	2,351,400	4,708,417
Transit cargo clearing..... tons..	2,344,258	2,375,088	4,719,346
Cargo received for transshipment..... tons..	27,244	1,816	29,060
Cargo transshipped..... tons..	26,531	1,506	28,037
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	99	29	128
Number of withdrawals.....	669	252	921
Tons received.....	2,273	254	2,527
Tons withdrawn.....	2,427	236	2,713
Packages received.....	5,070	2,664	7,734
Packages withdrawn.....	8,824	2,061	10,885
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	32	2	34
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	9,629	3	9,632
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	72	4	76
U. S. Army, including vessels..... tons..	19	2	21
Individuals and companies..... tons..	252		252
Panama Railroad Company..... tons..	7		7
Transferred to Navy..... tons..	9		9
Total sales and issues..... tons..	9,988	9	9,997

	Cristobal.	Balboa.	Total.
Coal on hand, July 1, 1930.....tons..	114,521	550	115,071
Coal on hand, August 1, 1930.....tons..	104,533	541	105,074
Coal received from Navy.....tons..		9	9
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....bbls..	6,154.80	13,511.23	19,666.03
Panama Railroad Company.....bbls..	150.00	85.84	235.84
U. S. Army and Navy.....bbls..		108.10	108.10
Individuals and companies.....bbls..		138.76	138.76
Total sales and issues.....bbls..	6,304.80	13,843.93	20,148.73
Fuel oil received during July, 1930.....bbls..		79,438.64	79,438.64
Fuel oil on hand, August 1, 1930.....bbls..	* 73,639.90	105,618.07	* 179,257.97
Diesel oil sold during July, 1930.....bbls..	11,935.62	564.22	12,499.84
Diesel oil on hand, August 1, 1930.....bbls..	* 1,082.50	18,136.89	* 19,219.39
Miscellaneous transfers.....bbls..	13,296.65	822.85	14,119.50
Gasoline and kerosene pumped for The Panama Canal.....bbls..	2,523.24	4,843.64	7,366.88
Gasoline pumped for individuals and companies.....bbls..	940.40	7,121.20	8,061.60
Oil pumped for individuals and companies.....bbls..	516,474.78	301,066.50	817,541.28
Oil pumped for U. S. Navy.....bbls..	29,601.00	3,297.00	32,898.00
Total fuel oil, gasoline, and kerosene handled.....bbls..	581,076.49	331,559.34	912,635.83
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	19	3	22
Measured for Panama Canal net tonnage.....	5	1	6
Remeasured for Panama Canal net tonnage.....	16	2	18
Panama Canal net tonnage corrected.....	2	3	5
U. S. equivalent tonnage corrected.....	8	11	19
Services of harbor equipment:			
Tugs, total operating hours.....	331½	239½	570½
Launches, total operating hours.....	1,309	1,567½	2,876½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$11,375.00	\$8,823.75	\$20,198.75
Pilotage.....	17,618.00	8,140.00	25,758.00
Seamen.....	10,536.00	12,272.00	22,808.00
Launch service.....	2,137.50	2,852.00	4,989.50
Wharfage.....	16,178.19	5,679.71	21,857.90
Ships measured.....	185.00	15.00	200.00
Miscellaneous.....	399.33	357.50	756.83
Ships repaired at Panama Canal shops:			
Commercial.....	41	12	53
U. S. Army and Navy.....	3	2	5
Panama Canal equipment.....	3	12	15
Total.....	47	26	73
Vessels dry docked:			
Commercial.....	7	1	8
U. S. Army and Navy.....	1	1	2
Panama Canal equipment.....	1	8	9
Total.....	9	10	19
Clearances issued.....	316	237	553
Bills of health issued.....	347	240	587

* Shortage of 409.40 barrels on account of shrinkage and seepage.
of inventory.

* Shortage of 111.35 barrels on account
of inventory.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal...	549	3,431,761	2,100,833	506	3,127,353	1,928,765
Vessels entering port but not transiting Canal.	74	349,517	208,712	10	63,883	40,099
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	718,287	431,519	96	559,436	333,932
<i>Ships clearing.</i>						
All vessels, including those transiting Canal...	556	3,402,591	2,084,459	516	3,164,128	1,957,587
Vessels clearing port but not transiting Canal.	74	355,640	211,240	11	64,919	40,681
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	709,129	426,634	96	570,933	340,967

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,462	681	2,143	106	353	459
From Pacific ports.....	180	135	315	269	248	517
Total disembarking.....	1,642	816	2,458	375	601	976
Embarking:						
For Atlantic ports.....	1,354	708	2,062	127	296	423
For Pacific ports.....	209	76	285	359	283	642
Total embarking.....	1,563	784	2,347	486	579	1,065
Remaining on board:						
From Atlantic to Pacific ports.....	1,858	2,088	3,946	2,089	1,930	4,019
From Pacific to Atlantic ports.....	1,668	1,646	3,314	1,621	1,932	3,553
From Atlantic to Atlantic ports.....	769	165	934			
From Pacific to Pacific ports.....				33	471	504
Total remaining on board.....	4,295	3,899	8,194	3,743	4,333	8,076
Total arriving.....	5,937	4,715	10,652	4,118	4,934	9,052
Total departing.....	5,858	4,683	10,541	4,229	4,912	9,141

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	230	44	19.13
Pacific to Atlantic.....	258	50	19.38
Total.....	488	94	19.26

In addition to the aforesaid, 65 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 163 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of July, 1930, 43 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of July, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,911.43	\$11,116.20	\$23,979.46	\$84.55	\$7,108.28	\$44,199.92
Government vessels.....	151.00	808.59	7,567.06	448.50	705.68	9,680.83
P. R. R. vessels.....	3.60	209.88	966.98	813.24	17.42	2,011.12
Total sales, July, 1930.....	2,066.03	12,134.67	32,513.50	1,346.29	7,831.38	55,891.87
Total sales, July, 1929.....	3,681.18	17,267.26	59,880.22	932.76	11,356.04	93,117.46
Total sales, July, 1928.....	3,242.14	14,054.59	46,338.19	933.54	9,124.77	73,693.23
Sales at Balboa to:						
Commercial vessels.....	677.31	1,637.57	12,439.45	404.93	11,163.58	26,322.84
Government vessels.....	356.55	895.67	11,118.96	81.05	420.80	12,873.03
P. R. R. vessels.....				38.90		38.90
Total sales, July, 1930.....	1,033.86	2,533.24	23,558.41	524.88	11,584.38	39,234.77
Total sales, July, 1929.....	1,617.35	18,961.10	35,631.97	1,640.86	8,149.92	66,001.20
Total sales, July, 1928.....	1,913.94	16,109.71	36,909.88	1,548.79	5,976.38	62,458.70

The aggregate sales to Government vessels during the month was \$22,553.86; to Panama Railroad vessels, \$2,050.02; and to other commercial vessels, \$70,522.76, making the total sales to all vessels \$95,126.64. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of July, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			July, 1930.	July, 1929.	July, 1928.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	249	216	465	6	9	15	480	511	501
Pedro Miguel.....	252	217	469	13	21	34	503	542	520
Miraflores.....	251	216	467	13	21	34	501	534	518
Number of vessels put through locks.									
Gatun.....	257	230	487	36	36	72	559	595	578
Pedro Miguel.....	256	225	481	44	51	95	576	629	623
Miraflores.....	256	225	481	48	54	102	583	636	622

¹ Includes tolls-paying launches under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	38	33	33
Panama Canal equipment.....	16	50	57
Launches (under 20 tons).....	17	9	9
Panamanian Government vessels.....	1	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in July, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.....	<i>Cubic feet.</i> 1,904,970,000	<i>Cubic feet.</i> 1,531,600,000	<i>Cubic feet.</i> 1,486,700,000
Leakage.....	40,000,000	12,500,000	20,000,000
Maintenance.....	3,380,000		
Total, July 1930.....	1,948,350,000	1,544,100,000	1,506,700,000
Total, June, 1930.....	1,982,360,000	1,567,860,000	1,552,580,000
Total, July, 1929.....	2,086,630,000	1,608,210,000	1,604,570,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of July, 1930, are shown in comparative form, in the following tabulations:

	July.		July—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 1,926	<i>C. f. s.</i> 2,285	<i>C. f. s.</i> 6,197	<i>C. f. s.</i> 1,248	<i>C. f. s.</i> 2,786
Maximum momentary discharge for the month.....	10,778	17,790	¹ 33,700	.....	.....
Gatun Lake watershed, total yield.....	4,882	5,107	14,663	2,677	6,945
Gatun Lake watershed, net yield.....	4,396	4,482	14,156	1,898	6,395
Draft on Gatun Lake for lockages and power.....	2,955	² 2,810	2,955	² 1,244	² 2,288

¹ July 22, 1927.

² July, 1914, not included.

³ No water saving.

The discharge of the Chagres River at Alhajuela was 18 per cent below the 29-year average, or 2,285 c. f. s., compared with an average of 2,786 c. f. s. The maximum momentary discharge for the month was 17,790 c. f. s. at elevation 100.04 feet on the

8th. The minimum discharge was 1,025 c. f. s. at elevation 92.25 feet on the 3d. The maximum mean monthly discharge on record for the month of July is 6,197 c. f. s. in 1927, and the minimum 1,248 c. f. s. in 1905. The maximum momentary discharge on record for July is 33,700 c. f. s. at elevation 103.99 feet on July 22, 1927.

The total yield of the Gatun Lake watershed for July was 5,107 c. f. s., or 26 per cent below the 17-year average for July of 6,945 c. f. s. Maximum and minimum total yields of record for July are 14,663 c. f. s. in 1927, and 2,677 c. f. s. in 1914. The lake varied in elevation from 83.16 feet on the 7th to a maximum of 84.47 feet on the 27th, and ended at elevation 84.29 feet, showing a net rise during the month of 0.92 foot.

Miraflores Lake varied between elevations 53.40 feet on the 25th and 54.76 feet on the 10th, averaged 53.81 feet, and ended at elevation 54.06 feet.

SEISMOLOGY.

Six seismic disturbances were recorded during the month, on the 7th, 14th, 15th, 27th, 29th, and 30th. The disturbance on the 30th was of intensity V-VI on the Rossi-Forel scale. No damage was done to Canal structures.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,262,900 kilowatt hours, and the computed water consumption was 4,087,153,990 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 5,300 kilowatt hours, and the fuel oil consumption was 25.7 barrels. The station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 47 vessels during the month. There were 421 work orders issued during the month, as compared with 474 issued during the previous month.

MECHANICAL DIVISION.

During the month of July, 1930, miscellaneous repairs were made on 47 vessels at Cristobal and 26 at Balboa. Nine vessels were dry docked at Cristobal and 10 at Balboa. Work was completed and carried forward on several pieces of equipment of The Panama Canal, the United States Army and Navy, and commercial steamship lines.

MUNICIPAL ENGINEERING DIVISION.

One hundred and twenty-three square yards of concrete pavement was laid at the Chilibrillo river, on the Madden road. The bridges over the Chilibre and Chilibrillo rivers were completed except for the road slab. The Azote Caballo road was completed.

On the Thatcher Highway the erection of Camp No. 1 was 90 per cent completed. One and one-quarter miles of temporary road was built and a temporary ferry put in operation.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 740,394,000 gallons.

DREDGING DIVISION.

The East Las Cascadas slide showed a slight movement along the waterfront and the Southwest La Pita slide a slight surface movement during the month. A break occurred on the 26th between stations 1735-00 and 1738-00 W. on the West Lirio slide, extending back 200 feet from the new west prism line and about 60 feet above the lake level. There was a depth of 20 feet on the west prism line and a depth of 39 feet, 50 feet east at station 1738-00. A settlement of this slide at the water's edge also took place between stations 1772-00 and 1724-50 W. The general movement of the West Culebra slide along the waterfront continued throughout the month with an average movement of 1.1 feet toward the Canal between stations 1772-00 and 1794-00 W. with a maximum of 2.0 feet at station 1792-00. A movement of the East Barge Repair slide took place on the 10th, when 20 feet of the Lirio run-off culvert head wall and apron broke down and 25,000 cubic yards of material entered the Canal. This material pushed out over the east prism line for 65 feet, leaving a depth of water of 33 feet at station 1748-00, 85 feet east of the center line. A few bank breaks

occurred during the month. There was no interference with shipping on account of slides.

The total excavation during July, 1930, was 655,315 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Gaillard Cut—			
East Barge repair slide.....	12,150	14,800	26,950
Project No. 3.....	7,450	19,750	27,200
West Lirio slide.....	12,700	38,150	50,850
Maintenance.....	2,750	4,150	6,900
Pacific Entrance—			
Project No. 1.....	59,000	196,600	255,600
Maintenance.....	163,000	20,000	183,000
Auxiliary.....	600	1,200	1,800
Plant excavation:			
Dredging sand at Chame.....	3,515		3,515
France Field.....	99,500		99,500
Total.....	380,665	294,650	655,315

The ferry crossing at the north end of Pedro Miguel lock operated 31 days during the month. One thousand three hundred and sixty-four trips were made, and 144 Panama Canal, 26 U. S. Army, and 4,470 other vehicles, a total of 4,640, were ferried across the Canal.

MADDEN DAM PROJECT.

Preliminary layouts of hydroelectric works were drawn showing the power house on the right bank of the river and the spillway over the main dam, with intakes upstream from spillway and also in spillway section. The installation of low-head units to utilize storage at the lower elevations of reservoir level was studied. Comparative studies were made of long-span and short-span transmission lines, and design of towers for long-span line started. Layout of general wiring diagram for the power development was drawn. Natural storage between Alhajuela and Gamboa for the 1,000-year flood was calculated.

The precise level circuit, from the precise bench mark datum along the Canal, has been carried up the Madden road to the Azote Caballo Ridge road, and will be extended to the damsite and along the Madronal and Azote Caballo ridges.

Sufficient mapping has been done to form a basis for an estimate of the amount of earth dam material available on the Azote Caballo side of the reservoir. At typical and centrally-located points four test pits and one sampling trench were staked out, and at two of these points work is in progress.

Requisition was issued to cover simple and three dimensional tests of additional specimens of rock from strata "b" and "c" at the damsite, and 21 specimens from the left bank were shipped to the United States on the 27th. At the end of the month 24 specimens from the right bank were nearly ready for shipment. Tests for moisture content, and simple compression tests of cores from the same drill holes are being made at Miraflores Laboratory.

No sink-hole excavation was done during the month. Cleaning out and timbering was done at No. 1 for a length of 300 feet, at No. 5 for 9 feet, and at No. 13 for 5 feet. At No. 20 the shaft was timbered, drain for surface water constructed, and concrete base for hoist was built. Blowers and pipe lines have been installed and are now operating at sink holes Nos. 1 and 5.

One thousand two hundred and forty-three feet of drilling of all types was performed during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children occupying Panama Canal quarters on July 31, 1930, was 22,640, composed of 7,818 Americans, 2,829 of whom were men, 2,319 women, and 2,670 children; 245 Europeans, 92 of whom were men, 38 women, and 115 children; 14,577 West Indians, 4,219 of whom were men, 2,686 women, and 7,672 children. The total number of persons in quarters on July 31, 1929, was 21,906.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of July 16, 1930, with a comparison of the working force for the preceding month and for July 1929:

	As of July 16, 1930.			Total employees.	
	Gold.	Silver.	Total.	June, 1930.	July, 1929.
Operation and Maintenance:					
Office.....	58	71	129	140	105
Electrical.....	158	173	331	335	327
Municipal Engineering.....	99	972	1,071	762	1,599
Lock Operation.....	239	713	952	941	956
Dredging.....	202	1,009	1,211	1,179	1,251
Madden Project.....	30	266	296	669	.....
Mechanical.....	503	877	1,380	1,388	1,401
Marine.....	201	587	788	799	856
Fortifications.....	26	151	177	165	317
Total.....	1,516	4,819	6,335	6,378	6,812
Supply Department:					
Quartermaster.....	223	1,988	2,211	2,203	2,131
Commissary.....	234	1,326	1,560	1,552	1,503
Cattle Industry—Plantations.....	2	94	96	100	188
Hotel Tivoli.....	8	107	115	116	109
Hotel Washington.....	9	95	104	104	109
Transportation.....	76	252	328	325	287
Total.....	552	3,862	4,414	4,400	4,327
Accounting Department.....	203	6	209	210	216
Health Department.....	292	860	1,152	1,155	1,147
Executive Department.....	528	330	858	865	844
Total.....	1,023	1,196	2,219	2,230	2,207
Panama Railroad Company:					
Superintendent.....	52	250	302	302	326
Transportation.....	63	123	186	188	190
Receiving and Forwarding Agency.....	90	1,017	1,107	1,377	1,494
Coaling Stations.....	43	183	226	249	278
Total.....	248	1,573	1,821	2,116	2,288
Grand total, July, 1930.....	3,339	11,450	14,789	.....	.....
Grand total, June, 1930.....	.....	.....	.....	15,124	.....
Grand total, July, 1929.....	.....	.....	.....	.....	15,634

Additions to the gold force on the Isthmus in July were as follows: Employed in the United States, 9; reemployed in the United States, 1; employed on the Isthmus, 17; reemployed on the Isthmus, 15; total, 42. Separations from the gold force totaled 30, as follows: Resigned, 18; discharged, 8; retired, 3; died, 1. At the end of the month there were on file 520 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 201 deaths occurred during the month of July, 1930, among the population of the Canal Zone, and the cities of Panama and Colon, which is equivalent to an annual death rate of 16.79 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 28; tuberculosis (various organs), 22; nephritis (acute and chronic), 17; and diarrhea and enteritis, 13. There were 10 deaths from cancer, 10 from organic diseases of the heart, 9 from syphilis, and 1 each from leprosy, meningococcus meningitis, and chicken pox. There were 21 deaths among nonresidents. These are not included in the above statistics.

There were 320 live births and 12 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.74. Deaths among children under 1 year of age numbered 44, giving an infant mortality rate based on the number of live births reported, of 137.50.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during July was 464, of whom 82 were employees (13 white and 69 colored), 72 were members of employees' families (6 white and 66 colored), 19 were Canal Zone agriculturists, 152 were other civilian nonemployees, and 139 were Army and Navy personnel. Of the 154 employees and members of employees' families, 54 were probably infected outside our sanitaried areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were three deaths from malaria among residents, 1 a Canal Zone agriculturist, 1 colored adult living in Panama City, and 1 a 27-day-old baby who evidently contracted the disease at the place of its birth in Panama City.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$430,542.13, of which \$411,988.15 was for the Department of Operation and Maintenance, and \$18,553.98 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$56,111.16.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of June, 1930, as compared with June, 1929, with the figures for the fiscal year ended June 30, 1930, as compared with the fiscal year 1929.

It is impossible to submit figures for the month of July at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	June, 1930.	June, 1929.	Fiscal year.	
			1930.	1929.
Tolls.....	\$2,101,108.17	\$2,127,851.84	\$27,077,117.36	\$27,123,534.33
Other receipts.....	360,104.72	389,293.72	4,500,655.50	4,055,424.47
Total transit revenues.....	2,461,212.92	2,517,145.56	31,577,772.86	31,178,958.80
Total transit expenses.....	1,196,164.21	1,235,305.43	13,495,321.08	13,449,183.79
Net transit revenues.....	1,265,048.71	1,281,840.13	18,082,451.78	17,729,775.01
Three per cent capital charge...	621,273.45	619,006.34	7,456,319.89	7,392,091.89
Transit surplus.....	643,775.26	662,833.79	10,626,131.89	10,337,683.12
Business revenues.....	1,635,358.99	1,395,771.67	19,865,895.45	17,236,785.02
Business expenses.....	1,573,010.67	1,637,249.01	19,104,923.79	16,498,934.76
Net revenues.....	62,348.32	(241,477.34)	760,971.66	737,850.26
Three per cent capital charge.....	64,447.23	62,674.50	808,861.93	788,424.05
Business deficit.....	(2,098.91)	(304,151.84)	(47,890.27)	(50,573.79)
Combined revenues.....	4,096,571.91	3,912,917.23	51,443,668.31	48,415,743.82
Combined expenses.....	2,769,174.88	2,872,554.44	32,600,244.87	29,948,118.55
Net revenues.....	1,327,397.03	1,040,362.79	18,843,423.44	18,467,625.27
Three per cent capital charge.....	685,720.68	681,680.84	8,265,181.82	8,180,515.94
Combined surplus.....	641,676.35	358,681.95	10,578,241.62	10,287,109.33

Respectfully,

H. BURGESS,
Governor.

Embarking or Disembarking Passengers.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS C. Z., August 22, 1930.

Notice to steamship agents:

Among vessels transiting the Panama Canal, there are some which stop at only one terminal to discharge and receive passengers, and a few that stop at neither terminal. In consequence, on numerous occasions in the past this office has received requests from the agents of vessels concerned (or direct requests from the prospective passengers or friends of actual passengers) for permission to embark or disembark passengers while the vessel, in transit, is at one of the locks.

This procedure is strictly prohibited by Executive Order (See Rule 40, "Rules and Regulations Governing Navigation of the Panama Canal"). Agents of vessels, therefore, will please see that, in the future, all passengers or prospective passengers are notified accordingly, and make such arrangements as may be necessary and safe for embarking or disembarking such passengers in the terminal basins, either prior or subsequent (as the case may be) to the vessel's transiting the locks.

C. H. WOODWARD,
Marine Superintendent.

Approved:

H. BURGESS,
Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

No. 737.

AID TO NAVIGATION.

Panama Canal, Atlantic entrance, west breakwater entrance. The following information is furnished by the Lighthouse Subdivision:

The west breakwater beacon, on the west side of the entrance through the breakwater of Limon Bay, temporarily discontinued August 7, 1930, due to rebuilding operations (see Notice to Mariners, B. H. No. 731, August 8, 1930) was reestablished August 21, 1930.

Description. The new beacon is located on the same position occupied by the old one and consists of a 375 m.m. acetylene gas lantern mounted on a 24-foot steel tower; tower set on a 10-foot concrete pedestal. The tower and pedestal are painted white.

Characteristic. Red group flashing, period 2 seconds: 0.3 light, 0.4 eclipse, 0.3 light, 1.0 eclipse; *height*, 37.5 feet above mean high water; *visibility*, 10 nautical miles; *position*, lat. 9° 23' 23" N., long. 79° 55' 31" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 23, 1930.

No. 738.

The following is quoted from Notice to Mariners No. 33 of August 16, 1930, published by the Hydrographic Office, Navy Department, Washington, D. C.:

1. *Curacao Island, Canon Point light, characteristic changed.* Canon Point light has been changed from *group flashing white to flashing white*. Period 4 seconds; flash 0.3 second, eclipse 3.7 seconds. The light is visible 8 miles. Approximate position, 12° 03' N., 68° 45' W.

2. *Peru, Islay Point, light established.* The second officer of the American steamer *Nosa Chief* (Ex *Garfield*), reports under date of June 17, 1930, that a flashing white light has been established on Flat Rock Point, Islay Point, Peru. Approximate position, 17° 00' 04" S., 72° 07' 30" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 25, 1930.

No. 739.

Panama, Canal Zone, Balboa harbor, lights on oil berth changed. The two green lights formerly marking Dock 2-C (Oil Crib) in Balboa harbor, have been removed and one red light has been installed in center of offshore edge of the structure.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending August 23, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
San Mateo.....	United Fruit Co.....	August 16....	August 16....		68
Corinto.....	Panama Mail S. S. Co.....	August 16....	August 16....		1
S. A. Perkins.....	Jas. Griffiths & Sons.....	August 17....	August 22....	4,069	
Emma Maersk.....	Standard Oil Co.....	August 17....	August 18....	11,836	
Bokuyo Maru.....	Nippon Yusen Kaisha.....	August 17....	August 17....	151	5
Chateau Thierry.....	U. S. Government.....	August 18....	August 19....	29	10
Tatsuno Maru.....	Nippon Yusen Kaisha.....	August 18....	August 19....	219	
City of Panama.....	Panama Mail S. S. Co.....	August 18....	August 19....	67	
Nitro.....	U. S. Government.....	August 19....	August 19....	2	3
Santa Barbara.....	Grace Line.....	August 20....	August 20....	3	
Pennsylvania.....	Panama-Pacific Line.....	August 22....	August 22....		184
Suriname.....	United Fruit Co.....	August 22....	August 23....	554	36
Carl Legien.....	Hamburg-American Line.....	August 23....	August 23....	208	

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, August 23, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ebro	16	16.00	17	6.08	17	13.26	17	14.40	British	Pacific Steam Nav. Co.	450.0	56.0	24.8	New York, N. Y.	Talcahuano, Chile.	General	2,981	9,291	6,301
Pueblo	17	2.15	17	6.20	17	13.41	17	15.00	American	Ridgely Oil Co.	340.0	49.2	17.0	New York, N. Y.	Los Angeles, Calif.	Ballast	.....	4,613	2,996
Dwight	17	4.15	17	7.20	17	14.33	17	15.40	American	Tidefield Oil Co.	435.0	56.0	16.6	New York, N. Y.	San Francisco, Cal.	Ballast	.....	7,441	5,077
Royal Prince	17	5.40	17	7.45	17	15.13	17	16.40	British	Prince Line, Ltd.	480.4	58.0	21.0	Boston, Mass.	Manila, P. I.	General	3,617	8,564	6,089
Brunswick	17	9.08	17	9.30	17	16.35	17	19.14	Panamanian	Atlantic Refining Co.	471.0	63.0	20.0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	.....	9,178	6,050
Sabotawan	17	9.50	17	10.05	17	17.31	17	22.00	American	Redwood Line	387.0	52.2	19.0	Houston, Texas	Seattle, Wash.	General	3,839	5,708	4,138
Port Napier	17	10.05	17	10.45	17	17.51	18	2.10	British	Com'ch & Dom. Line.	490.2	61.0	25.0	New York, N. Y.	Fremantle, Australia	General	2,571	10,978	8,115
Gen. Wm. M.	17	10.05	17	10.45	17	17.51	18	2.10	British	Com'ch & Dom. Line.	490.2	61.0	25.0	New York, N. Y.	Fremantle, Australia	General	2,571	10,978	8,115
Graham	17	15.50	17	16.10	18	9.37	18	11.19	American	U. S. Army.	156.0	32.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....	8,201	6,226
Eagle	17	14.00	18	6.10	18	14.03	18	15.30	British	Standard Transp. Co.	410.0	56.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	.....	4,230	9,079
Ruapahu	17	14.00	18	6.10	18	14.03	18	15.30	British	N. Z. Shipping Co.	457.0	58.0	27.6	London, England	Auckland, N. Z.	General	.....	.....	6,798
Chateau	17	17.55	18	6.40	18	13.25	19	12.15	American	U. S. Army.	436.9	58.2	26.0	Brooklyn, N. Y.	Honolulu, T. H.	Army supplies	229	.....	.....
Edgar	17	22.50	18	7.25	18	14.27	19	15.30	American	Luckenbach Line.	425.0	57.3	23.0	New Orleans, La.	Seattle, Wash.	General	3,994	8,568	6,648
Lindenbank	18	7.45	18	8.20	18	15.50	19	16.50	British	Amer-Oriental Line.	422.0	56.6	23.8	Baltimore, Md.	Nagoya, Japan	General	5,086	7,249	5,108
Mane	18	11.50	18	12.00	18	19.30	19	20.50	American	Isthmian S. S. Lines	402.0	54.0	25.0	Baltimore, Md.	Seattle, Wash.	Steel, general	6,621	6,936	5,024
Nitro	17	8.40	19	5.55	19	13.45	20	5.30	American	U. S. Navy.	462.0	60.0	22.6	Hampton Rds., Va.	San Diego, Calif.	General	1,062	.....	.....
Saugstad	18	21.50	19	6.20	19	14.40	19	16.00	Norwegian	Fern Line	382.7	53.4	24.4	Houston, Texas	Saikoshin, China	Cotton, phosphate	7,200	6,100	4,240
Amerikaland	18	22.20	19	7.30	19	15.24	19	17.30	Swedish	Ore S. S. Corp.	561.0	72.0	22.3	New York, N. Y.	Cruz Grande, Chile	Ballast	15,560	15,560	4,496
San Gabriel	19	9.05	19	9.15	19	16.14	19	17.30	American	Pac-Atlantic S. Co.	331.0	52.3	17.3	Baltimore, Md.	Portland, Oreg.	General	2,800	5,719	4,023
Roseville	19	6.45	19	11.20	19	18.45	19	20.30	Norwegian	A. F. Klavness & Co.	426.4	58.5	25.0	Antwerp, Belgium	Seattle, Wash.	General	8,284	7,156	5,094
Dakota	19	10.45	19	12.05	19	19.10	19	20.34	American	Amer-Hawaitan Line.	407.7	53.7	19.0	Boston, Mass.	Seattle, Wash.	General	2,567	7,156	5,094
Sutherland	19	13.00	19	13.20	19	20.45	19	22.00	American	Nelson Line	380.0	53.2	22.0	New York, N. Y.	Seattle, Wash.	Iron, coal, gen.	4,984	6,654	4,123
F. J.	20	00.45	20	8.30	20	15.13	20	16.15	American	Luckenbach Line.	446.0	56.1	20.0	Boston, Mass.	Tacoma, Wash.	General	3,173	8,508	6,179
Fernwood	20	00.35	20	10.00	20	17.32	21	3.12	Norwegian	Treadahl, Plant, Lafonte	405.0	55.0	24.11	New Orleans, La.	Sydney, Australia	Asphalt, general	7,460	.....	.....
San Julian	20	4.35	20	12.21	20	19.18	20	20.30	American	States S. S. Co.	468.0	58.5	18.7	Philadelphia, Pa.	Seattle, Wash.	General	2,755	8,460	6,162
Agnew	20	12.30	20	12.45	20	19.58	21	4.05	American	Richfield Oil Co.	439.0	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,720	5,615	.....
Santa Barbara	20	7.10	20	14.05	20	20.50	21	1.27	American	Grace Line	466.0	64.0	23.0	New York, N. Y.	Valparaiso, Chile	General	2,095	10,687	6,633
Dorcas	20	.....	20	.....	20	10.29	20	.....	American	M. A. James	.....	.....	.....	Cristobal, C. Z.	Gatun, C. Z.	Towing barge	.....	3	3
D. R. M. No. 3	21	5.15	21	6.20	21	14.15	21	15.30	American	Anglo-Ecuador Oil Co.	407.4	52.2	19.0	Philadelphia, Pa.	Gatun, C. Z.	Ballast	.....	11	11
El Cervo	21	5.30	21	6.25	21	15.10	21	18.10	British	Anglo-Ecuador Oil Co.	412.0	55.0	23.0	Philadelphia, Pa.	La Libertad, Ecuador	Ballast	6,046	4,326	.....
Middlemeer	21	7.45	21	8.00	21	15.58	21	19.10	German	Anglo-Saxon Pet. Co.	400.5	54.3	24.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	7,700	7,004	4,340
Quebec City	18	16.50	21	10.40	21	17.44	21	19.00	British	Reardon Smith Line	216.5	32.9	14.8	Casa Bianca, Mor.	Yokohama, Japan	Phosphates	363	1,051	698
Calcutta	21	11.35	21	11.45	21	17.10	21	18.10	Norwegian	Westfal, Larsen & Co.	381.0	53.6	12.6	Cristobal, C. Z.	Guayaquil, Ecuador	General	7,000	7,004	4,340
Brandanger	21	11.35	21	11.45	21	17.10	21	18.10	Norwegian	Westfal, Larsen & Co.	381.0	53.6	12.6	Cristobal, C. Z.	Guayaquil, Ecuador	General	7,000	7,004	4,340
Olva	21	11.35	21	11.45	21	17.10	21	18.10	British	Davis & Newman	430.0	57.0	19.6	South Brewer, Me.	Los Angeles, Calif.	Ballast	6,280	6,280	4,722
																		7,348	5,182

7 Barge.

6 Launch.

5 Motor ship.

4 Ammunition ship.

3 Transport.

2 Mine planter.

1 Tanker.

Orbita	21	3.20	21	12.15	21	19.12	21	20.27	British.	Pacific Steam Nav. Co.	550.0	67.0	28.0	Liverpool, England	Tacabuan, Chile.	General	3,820 16,844	11,731
Balboa	21	17.25	22	6.05	22	13.51	22	17.50	Swedish.	Johnson Line.	426.0	56.0	24.0	Stockholm, Sweden	Tacoma, Wash.	General	7,094 7,480	5,533
Forbes	21	20.35	22	6.10	22	14.34	22	16.05	American.	Munson-McCor'k Line.	409.8	54.2	21.0	Philadelphia, Pa.	Tacoma, Wash.	General	4,299	4,999
Hauptman	21	5.55	22	7.15	22	15.20	23	1.05	American.	Panama-Pacific Line.	586.4	80.3	27.0	New York, N. Y.	San Francisco, Cal.	General	3,218 25,262	18,194
President	22	6.00	22	7.30	22	16.04	22	21.28	American.	Dollar Line.	600.0	65.0	29.0	New York, N. Y.	San Francisco, Cal.	General	4,264 17,081	11,314
Amnetta I.	22	8.10	22	8.10	22	17.24	22	18.34	Panamanian	United Fruit Co.	105.0	15.0	15.0	Perme, P.	Balboa, C. Z.	Bananas.	48	96
Sea Thrush	22	23.00	22	8.10	22	17.24	22	18.34	American.	Shepard S. S. Co.	410.0	54.2	21.6	Boston, Mass.	Seattle, Wash.	General	5,818	6,025
Western Sun	22	5.20	22	8.55	22	16.29	22	20.04	American.	Sun Oil Co.	480.6	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,607	4,841
Nosa Chief	21	16.50	22	10.05	22	18.03	22	19.21	American.	N. O. & S. A. S. Co.	299.4	45.0	17.8	New Orleans, La.	Tacabuan, Chile.	General	1,069	3,256
Rialto 5	21	10.25	22	11.00	22	18.18	22	23.34	Italian.	Navy Libera-Triestina.	430.8	55.0	18.0	Trieste, Italy	Vancouver, B. C.	General	2,910	7,789
Drechtidijk 6	21	10.50	22	14.00	22	11.35	22	23.12	Dutch.	Holland-American Line.	485.0	62.0	22.5	Rotterdam, Holland	Portland, Ore.	General	3,578 10,793	7,619
Clemens 6	21	10.50	22	14.00	22	11.35	22	23.12	American.	American Panama Corp.	485.0	62.0	22.5	Cristobal, C. Z.	Gatun, C. Z.	Towing barges.	12	12
No. 14, C. Z.	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
4443 7	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
No. 16, C. Z.	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
4499 7	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
No. 19, C. Z.	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
4119 7	22		22		22	11.35			American.	American Banana Corp.				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	17	17
Carl Legien	22	5.35	23	5.55	23	13.43	24	10.22	German.	Hamburg, Germany	409.8	54.0	23.8	Philadelph, Pa.	Seattle, Wash.	General	6,322	7,145
Pacific Spruce.	23	00.05	23	7.05	23	14.39	23	15.50	American.	Dimon S. S. Corp.	410.0	54.0	20.0	Philadelphia, Pa.	Seattle, Wash.	General	4,972	6,024
Champerico.	7-31	16.05	23	9.40	23	16.26	23	18.10	British.	Pacific Steam Nav. Co.	290.0	41.0	17.1	Boston, Mass.	Portland, Ore.	General	432	2,597
Kansas	23	10.15	23	10.35	23	17.09	24	18.10	American.	Amer-Hawailian Line.	404.0	53.9	18.6	Boston, Mass.	Portland, Ore.	General	3,236	6,779
Olio 5	23	13.35	23	13.36	23	20.50	24	3.10	Danzig.	W. Tankerschiff Rhederei	470.0	63.0	19.0	Hamburg, Germany	Talara, Peru.	Ballast.	9,248	6,310

* Motor boat.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Birkenhead	16	22.00	17	6.04	17	14.00	17	14.00	American.	Vacuum Oil Co.	425.0	57.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	9,310	7,502
Ferdale	17	5.30	17	6.43	17	14.30	17	18.55	British.	White Star Line.	116.0	63.2	23.0	Wellington, N. Z.	London, England	General	4,458	11,811
Caldas	16	22.50	17	7.25	17	15.25	18	23.00	Colombian.	National Navigation Co.	397.0	50.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	General	564	211
Saint Jean	17	8.20	17	9.06	17	16.10	17	22.05	French.	French Line.	397.0	50.1	24.0	Tacoma, Wash.	Le Havre, France.	Beans	4,327	5,849
Wind Rush	17	9.40	17	10.34	17	17.55	17	17.55	American.	Shepard S. S. Co.	410.0	54.2	24.0	Santa Rosalia, Mex.	Boston, Mass.	General, lumber	7,700	6,558
Sinaloa	17	10.00	17	10.53	17	18.20	17	22.00	British.	Shaw Line Steamships.	258.6	36.6	14.0	N. Westminster, B. C.	St. Pierre, France.	Whisky	900	1,568
Tamara	17	10.45	18	6.20	18	13.45	18	13.45	British.	Clan, Savill & Albion.	500.4	63.2	28.0	Wellington, N. Z.	London, England	Frozen, general	4,217	13,592
Lobos	17	16.00	18	6.40	18	15.05	18	17.20	British.	Pacific Steam Nav. Co.	404.7	52.4	27.0	Corral, Chile.	Hull, England	General	8,355	7,151
Leme	17	20.30	18	7.12	18	16.15	18	21.00	Italian.	Navy Libera-Triestina.	450.0	57.0	27.3	Vancouver, B. C.	Baltimore, Md.	General	8,888	8,805
Castlemoor	17	20.40	18	8.13	18	16.10	18	17.25	British.	Ore S. S. Corp.	420.0	54.0	28.0	Guayaquil, Ecuador	Baltimore, Md.	Iron ore	10,000	6,024
Cal.	17	7.45	18	8.49	18	16.50			German.	Roland Line.	216.5	32.9	14.2	Balboa, C. Z.	Cristobal, C. Z.	General	956	1,105
Seota	18	8.48	18	8.48	18	16.50			American.	U. S. Navy.	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Towing barge	10,296	11,724
Deltdijk	18	7.40	18	9.40	18	17.05	18	17.05	Dutch.	Holland-American Line.	490.0	64.6	30.0	Vancouver, B. C.	Rotterdam, Holland	General	10,296	11,724
Commander	18		18		18				American.	U. S. Navy.				Balboa, C. Z.	Gatun Lake, C. Z.	Launch	4,542	5,668
Mundelta	18	12.15	18	13.06	18	19.50	18	19.50	American.	Munson, McCor'k Line.	370.0	53.2	20.0	Vancouver, B. C.	New York, N. Y.	Lumber, general	4,542	5,668
Buffalo Bridge	17	24.00	18	13.29	18	20.30	18	20.30	British.	Charles Nelson & Co.	324.0	46.2	22.0	Seattle, Wash.	New York, N. Y.	Lumber, general	3,500	3,985
San Roendo	18	1.50	18	14.42	18	22.00	19	2.40	British.	Anglo-Mexican Oil Co.	407.0	52.2	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline	7,352	6,237
Pennmar	18	14.40	18	16.48	19	11.25	19	11.25	American.	Calmar S. S. Corp.	385.3	51.2	24.0	Portland, Ore.	Baltimore, Md.	Lumber	5,119	6,224
Tanager	18	15.50	18	18.36	19	12.35	19	12.35	Norwegian.	Westfal, Larsen & Co.	398.1	54.7	23.4	Vancouver, B. C.	Santa Fe, Arg.	General	5,339	6,858
California	18	12.12	19	6.12	19	13.50	19	14.50	American.	Panama-Pacific Line.	574.4	80.3	29.4	San Francisco, Cal.	New York, N. Y.	General	6,646	24,506

* Motor ship.

* Tanker.

** For orders.

* * * * *

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	
St. Michel	18	19	19	6:58	19	15:00	20	11:05	American	U. S. Army	448.0	58.2	25.4		Balboa, C. Z.	New York, N. Y.	Army supplies.	9,310	7,978
Brunaire	18	19	19	7:15	19	16:35	19	23:00	French	Cie. Nationale de Nav.	324.3	58.4	26.0		Los Angeles, Calif.	Lands End, Eng.	Gasoline.	8,048	5,385
Taeano Maru	18	14	20	7:48	19	17:35	19	23:41	Japanese	Nippon Yusen Kaisha.	445.0	58.0	27.0		Manila, P. I.	New York, N. Y.	(16)	8,015	5,71
Cherry Branch	18	20	30	7:53	19	18:10	19	18:10	British	F. & W. Ritson.	400.5	51.9	20.2		Colonel, Chile.	Liverpool, England	(17)	4,242	3,960
Panama	19	2:58	19	9:13	19	18:40	19	18:40	American	Grace-Hawain Line.	407.7	53.7	24.0		Portland, Oreg.	Boston, Mass.	General	5,089	5,065
Santa Rita	18	14	05	9:45	19	17:40	19	22:25	American	Amer.-Hawaiian Line.	370.0	53.2	20.0		Talcahuano, Chile.	New York, N. Y.	(18)	2,166	4,999
Lillian	19	6:54	19	10:00	19	17:20	19	19:20	American	Lockenbach Line.	449.0	60.0	30.4		Portland, Oreg.	Boston, Mass.	Lumber, general.	8,000	9,294
Chester Sun	19	6:55	19	10:50	19	19:55	19	19:55	American	Sun Oil Co.	480.0	66.0	28.2		Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	13,260	6,548
Stam	19	7:40	19	11:31	19	20:35	19	30:35	Danish	East Asiatic Co.	410.0	55.0	28.0		Vancouver, B. C.	Copenhagen, Den.	Wheat, general.	8,713	7,068
Iukisan Maru	19	9:00	19	12:28	19	21:05	19	30:35	Japanese	Mitsui Sussan K. K.	385.0	51.0	28.0		Portland, Oreg.	Belfast, Ireland.	Wheat.	7,050	6,242
Bodegraven	19	13:30	19	14:31	19	22:00	20	11:35	Dutch	Royal Neth. S. S. Co.	400.9	58.2	23.0		Corral, Chile.	Hamburg, Germany	General.	5,344	7,834
Erfurt	19	13:30	19	14:31	19	22:00	20	14:45	German	North German Lloyd	360.6	51.0	14.2		Champerico, Guat.	New Orleans, La.	Ballast.	5,906	7,473
Robin Hood	19	23:00	20	7:03	20	14:50	20	14:50	American	Isthmian S. S. Lines	376.5	53.8	25.4		Everett, Wash.	Baltimore, Md.	Lumber, general.	7,187	6,264
Sijestad	20	5:25	20	7:18	20	16:00	20	16:00	Norwegian	Fern Line	308.0	51.5	24.3		Kolschiang, Siam.	Habana, Cuba.	Rice.	6,675	5,404
Sorvard	20	6:00	20	7:49	20	17:10	20	17:10	Norwegian	S. L. Kloster	451.8	59.2	26.0		Bangkok, Siam.	Habana, Cuba.	Rice.	9,863	8,099
Lion	20	5:45	20	13:12	20	20:20	20	21:50	Norwegian	Anglo-Saxon Pet. Co.	373.9	53.6	23.0		Los Angeles, Calif.	Lands End, Eng.	Gasoline.	5,202	5,370
Patricia	20	12:30	20	13:21	20	20:25	20	21:50	German	Hamburg-American Line	460.0	62.8	26.0		Portland, Oreg.	Cobb, Ireland.	Wheat.	10,286	3,467
Voco	20	18:00	20	19:09	21	11:35	21	11:35	British	Vacuum Oil Co.	560.0	72.2	35.0		Pt. San Luis, Calif.	Bremen, Germany	Crude oil.	20,669	15,476
Bethore	21	2:25	21	6:06	21	17:00	21	17:00	Norwegian	Ore S. S. Corp.	435.9	56.2	28.0		Cruz Grande, Chile	Baltimore, Md.	Iron ore.	8,618	8,016
Knut Nelson	19	7:00	21	6:40	21	16:00	21	30:27	Norwegian	Fred Olsen & Co.	461.5	61.1	26.0		Vancouver, B. C.	Oslo, Norway.	Grain, flour, gen.	8,308	9,267
Seattle	21	5:00	21	7:33	21	15:30	21	30:27	German	Hamburg-American Line	381.5	53.1	18.0		Seattle, Wash.	Hamburg, Germany	General	4,055	5,616
Golden Gate	21	6:00	21	7:51	21	17:20	21	30:20	Norwegian	Scand.-So. Pacific Co.	160.2	32.0			Corral, Chile.	Oslo, Norway.	General	505	1,182
Gen. Wm. M.				8:02	21	15:15			American	U. S. Army	160.2	32.0			Balboa, C. Z.	Cristobal, C. Z.	General	505	1,182
Graham	21	11:00	21	12:00	21	18:20			Dutch	Royal Neth. S. S. Co.	202.9	33.1	12.0		Machalilla, Ecuador	Cristobal, C. Z.	General	8,373	6,413
Barat	21	11:40	21	12:27	21	19:50			British	Ben Line	420.0	54.0	26.2		N. West Fr, B. C.	Leith, Scotland.	(19)	7,062	6,205
Benary	21	12:35	21	13:37	21	22:40	22	3:55	American	U. S. Tankship Corp.	390.0	54.2	25.0		Kahului, T. H.	Mobile, Ala.	Molasses		4,286
Casiana	21	12:35	21	13:37	21	22:40	22	3:55	American	U. S. Tankship Corp.	390.0	54.2	25.0		Kahului, T. H.	Mobile, Ala.	Molasses		4,286
K. K.																			
Kingsbury	21	22:52	22	6:27	22	14:15	22	14:15	American	Standard Oil Co. of Cal.	440.0	58.2	30.0		Los Angeles, Calif.	Perth Amboy, N. J.	Gasoline.	9,350	9,033
Antioleite	21	23:00	22	6:41	22	15:30	22	15:30	British	Imperial Oil Co.	470.0	63.2	29.0		Lobitos, Peru	Halifax, N. S.	Crude oil.	11,830	9,191
Essequibo	22	5:20	22	7:21	22	14:50	22	19:30	British	Pacific Steam Nav. Co.	450.3	57.8	23.0		Lobitos, Peru	New York, N. Y.	General	2,033	9,158
Pacific Sun	22	5:30	22	7:49	22	16:05	22	19:30	American	Sun Oil Co.	480.6	66.0	28.2		Longbeach, Calif.	New York, N. Y.	Gasoline.	13,250	9,609
City of																			
Victoria	21	17:30	22	8:10	22	17:20	22	17:20	British	British-Can. Steamships	411.5	54.1	24.0		Vancouver, B. C.	London, England.	Lumber, wheat.	7,391	6,597
San Clemente	22	4:00	22	8:48	22	17:55	22	30:15	American	States S. S. Co.	423.9	54.4	19.0		Portland, Oreg.	Philadelphia, Pa.	Lumber, general.	3,264	6,476
Arizona	22	4:31	22	9:12	22	18:25	22	18:25	American	Amer.-Hawaiian Line.	434.3	57.7	23.0		Seattle, Wash.	Boston, Mass.	General	6,506	7,983

18 Copper, lead, and produce.

19 Lumber, wheat, and zinc.

20 Motor ship.

21 Mine planter.

22 For orders.

23 Sugar, peanuts, oil, rice, and general.

24 Cotton, nitrates, and copper.

25 Cotton, nitrates, and copper.

26 Cotton, nitrates, and copper.

Attn-	Date	Vessel	Line	From--	Date	Vessel	Line	For--
monarch	August 17	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	August 17	No. 945-M	Pan American Airways	Talara via wayports.
Vancouver	August 18	Peru	French Line	St. Nazaire via wayports.	August 17	No. 9670	Pan American Airways	San Salvador and waypts.
Chilore	August 18	Loutaro	Pacific Steam Navigation Co.	High seas for repairs.	August 17	No. 9776	Pan American Airways	Miami via wayports.
Clydesfield	August 18	Pastores	United Fruit Co.	New York via Habana.	August 17	Tolosa	United Fruit Co.	New York via Haiti.
El Aleto	August 18	Darien C-35	Seadfa Airplane Co.	Barraquilla and waypts.	August 17	Acon	Panama R. I. S. S. Line	New Orleans and way pts.
Annetta I	August 18	Sparholm	Aluminum Line	Kingston, Jamaica.	August 17	Heredia	United Fruit Co.	Port Limon, Costa Rica.
Steel Inventor	August 18	Dordian	Leyland S. S. Line	Liverpool via wayports.	August 17	Pasajero	Gough Brothers	La Guayra and waypts.
Port	August 19	No. 9685	Pan American Airways	San Salvador and waypts.	August 19	Sparholm	Aluminum Line	Port Limon, Costa Rica.
Freemantle	August 19	No. 945-M	Pan American Airways	Talara via wayports.	August 20	No. 9685	Pan American Airways	San Salvador and waypts.
S-14	August 20	Camden	United Fruit Co.	Caracas, D. W. I.	August 20	Pastores	United Fruit Co.	Port Limon, Costa Rica.
S-16	August 20	Camden	United Fruit Co.	Pro. Colombia, Colombia	August 20	No. 142-M	Pan American Airways	Miami via wayports.
S-17	August 20	Castilla	United Fruit Co.	New Orleans, La.	August 20	Peru	French Line	Havre via wayports.
Navy Launch	August 20	No. 9670	Pan American Airways	San Salvador and waypts.	August 21	Inapaquina	A. Tagarapulos	Colon, Rep. of Panama.
Dixie Arrow	August 20	No. 9187	Pan American Airways	Miami via wayports.	August 21	No. 300-N	Pan American Airways	Talara via wayports.
Sun	August 21	Inapaquina	Colon, Rep. of Panama.	Colon, Rep. of Panama.	August 21	No. 144-M	Pan American Airways	Pt. Cabello and wayports.
Sun	August 21	Bridgetown	Colombian S. S. Line	New York via wayports.	August 21	Metapan	United Fruit Co.	New York via wayports.
Lake Gortu	August 22	Cartago	Standard Fruit & S. S. Co.	New Orleans and Habana.	August 21	Castilla	United Fruit Co.	Pro. Colombia, Colombia.
Lake Ormoe	August 22	Nueva Espana	United Fruit Co.	Colon, Rep. of Panama.	August 21	Darien C-35	Seadfa Airplane Co.	Barraquilla and waypts.
Kellerwald	August 22	No. 144-M	Pan American Airways	Pt. Cabello via wayports.	August 22	No. 9670	Pan American Airways	San Salvador and waypts.
	August 23	No. 9776	Pan American Airways	Miami via wayports.	August 22	Bridgetown	Colombian S. S. Line	New York via wayports.
	August 23	No. 9685	Pan American Airways	San Salvador and waypts.	August 23	Nueva Espana	Diez & Garcia	Colon, Rep. of Panama.
	August 23	No. 300-N	Pan American Airways	Talara via wayports.	August 23	Iriona	United Fruit Co.	New Orleans and waypts.

* Tanker.

* Submarine.

* Barley, copper, fruit, and general.

* Barley, wheat, and canned goods.

* Ores, sugar, oil cake, and copper.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date	Vessel	Line	From--	Date	Vessel	Line	For--
August 17	Tolosa	United Fruit Co.	Port Limon, Costa Rica.	August 17	No. 945-M	Pan American Airways	Talara via wayports.
August 18	Peru	French Line	St. Nazaire via wayports.	August 17	No. 9670	Pan American Airways	San Salvador and waypts.
August 18	Loutaro	Pacific Steam Navigation Co.	High seas for repairs.	August 17	No. 9776	Pan American Airways	Miami via wayports.
August 18	Pastores	United Fruit Co.	New York via Habana.	August 17	Tolosa	United Fruit Co.	New York via Haiti.
August 18	Darien C-35	Seadfa Airplane Co.	Barraquilla and waypts.	August 17	Acon	Panama R. I. S. S. Line	New Orleans and way pts.
August 18	Sparholm	Aluminum Line	Kingston, Jamaica.	August 17	Heredia	United Fruit Co.	Port Limon, Costa Rica.
August 19	No. 9685	Pan American Airways	Liverpool via wayports.	August 17	Pasajero	Gough Brothers	La Guayra and waypts.
August 19	No. 945-M	Pan American Airways	San Salvador and waypts.	August 19	Sparholm	Aluminum Line	Port Limon, Costa Rica.
August 20	Camden	United Fruit Co.	Talara via wayports.	August 20	No. 9685	Pan American Airways	San Salvador and waypts.
August 20	Camden	United Fruit Co.	Caracas, D. W. I.	August 20	Pastores	United Fruit Co.	Port Limon, Costa Rica.
August 20	Castilla	United Fruit Co.	Pro. Colombia, Colombia	August 20	No. 142-M	Pan American Airways	Miami via wayports.
August 20	No. 9670	Pan American Airways	New Orleans, La.	August 20	Peru	French Line	Havre via wayports.
August 20	No. 9187	Pan American Airways	San Salvador and waypts.	August 21	Inapaquina	A. Tagarapulos	Colon, Rep. of Panama.
August 21	No. 945-M	Pan American Airways	Miami via wayports.	August 21	No. 300-N	Pan American Airways	Talara via wayports.
August 21	Inapaquina	Colon, Rep. of Panama.	Colon, Rep. of Panama.	August 21	No. 144-M	Pan American Airways	Pt. Cabello and wayports.
August 21	Bridgetown	Colombian S. S. Line	New York via wayports.	August 21	Metapan	United Fruit Co.	New York via wayports.
August 22	Cartago	Standard Fruit & S. S. Co.	New Orleans and Habana.	August 21	Castilla	United Fruit Co.	Pro. Colombia, Colombia.
August 23	Nueva Espana	United Fruit Co.	Colon, Rep. of Panama.	August 21	Darien C-35	Seadfa Airplane Co.	Barraquilla and waypts.
August 23	No. 144-M	Pan American Airways	Pt. Cabello via wayports.	August 22	No. 9670	Pan American Airways	San Salvador and waypts.
August 23	No. 9776	Pan American Airways	Miami via wayports.	August 22	Bridgetown	Colombian S. S. Line	New York via wayports.
August 23	No. 9685	Pan American Airways	San Salvador and waypts.	August 23	Nueva Espana	Diez & Garcia	Colon, Rep. of Panama.
August 23	No. 300-N	Pan American Airways	Talara via wayports.	August 23	Iriona	United Fruit Co.	New Orleans and waypts.

* Air Mail carrier.

* Motor schooner.

* Other than ships passing through the Canal.

(Continued on page 60, column 2.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending August 23, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Buenaventura	Panama R. R. S. S. Line	August 7	August 9	1,469	37
Magdalena	Hamburg-American Line		August 10		631
Washington	French Line		August 10		212
Parismina	United Fruit Co.		August 10		5
Durazzo	Hamburg-American Line		August 10		133
Calamares	United Fruit Co.	August 10	August 10	19	309
Guayaquil	Panama R. R. S. S. Line	August 10	August 10	238	(²)
Colombo	Italian Line	August 10	August 11	292	2
Wanuta	Standard Fruit & S. S. Co.	August 10	August 11	353	(²)
Lochgoil	Royal Mail Steam Packet Co.	August 10	August 11	38	496
Alvarado	Pacific Steam Navigation Co.	August 10	August 11	35	40
Nebraska	Royal Mail Steam Packet Co.	August 10	August 11	(¹)	78
Tela	United Fruit Co.		August 11		110
Emil Kirdorf	Hamburg-American Line	August 11	August 11	229	2
Santa Inez	Grace Line	August 11	August 12	33	180
Guatemala	Panama Mail S. S. Co.	August 11	August 12	309	174
Santa Tecla	N. O. & S. A. S. S. Co.	August 11	August 12	32	(²)
Tolosa	United Fruit Co.	August 11	August 13	565	61½
San Marcos	States S. S. Co.	August 12	August 12	11	(²)
Manizales	North German Lloyd		August 12		133
Nitokris	Hamburg-American Line	August 12	August 12	71	25
Pearl Marie	R. Feuillebois	August 12	August 12	(¹)	14½
Lagarto	Pacific Steam Navigation Co.	August 12	August 12	59	89
Dramatist	T. & J. Harrison	August 12	August 13	228	(²)
Van Rensselaer	Royal Netherlands S. S. Co.	August 12	August 13	14½	19
Kinderdijk	Holland-American Line	August 12	August 13	366	2
Alda	North German Lloyd	August 12	August 13	21	114
Archer	Roosevelt Line	August 13	August 13	101	(²)
Pacific Pioneer	Furness, Withy & Co.	August 13	August 14	(¹)	221
Bellasco	Aluminium Line	August 13	August 14	251	(²)
Iriona	United Fruit Co.	August 13	August 14	1,004	43
Santa Marta	United Fruit Co.	August 13	August 14	429	170
Swiftlight	C. D. Mallory	August 13	August 14	12,269	(²)
H. H. Rogers	Standard Shipping Co.	August 13	August 15	14,799	(²)
Ancon	Panama R. R. S. S. Line	August 13		4,542	
C. C. Acme	Maxwell Newball	August 13	August 15	10	(²)
Cauca	National Navigation Co.		August 14		296
Marie Bakke	Scandinavian-South Pacific Co.	August 14	August 14	29	(²)
Colombia	Panama Mail S. S. Co.	August 14	August 15	378	171
Bogota	Colombian S. S. Line	August 14	August 15	½	77
Daytonian	Leyland S. S. Line	August 14	August 15	(¹)	143
Tacoma	Hamburg-American Line	August 14	August 16	104	484
Manuel Arnus	Spanish Line	August 14		160	
Tela	United Fruit Co.	August 15	August 16	3	128
Van Rensselaer	Royal Netherlands S. S. Co.	August 15	August 16	(¹)	192
Atlantida	Standard Fruit & S. S. Co.	August 15	August 16	872	295
San Mateo	United Fruit Co.	August 16	August 16	744	136
Heredia	United Fruit Co.	August 16		154	
Santa Clara	Grace Line	August 16	August 16	113	1
Dora K.	R. Feuillebois	August 16	August 16	(²)	7½
Ebro	Pacific Steam Navigation Co.	August 16		19	
Lautaro	Pacific Steam Navigation Co.	August 16		73	
Corinto	Panama Mail S. S. Co.		August 16		987
Ancon	Panama R. R. S. S. Line		August 17		527
Manuel Arnus	Spanish Line		August 17		560
Heredia	United Fruit Co.		August 17		30
Ebro	Pacific Steam Navigation Co.		August 17		210
Tolosa	United Fruit Co.	August 17	August 17	3	31½
Caldas	National Navigation Co.	August 17	August 18	80	69
Delftdijk	Holland-American Line	August 18	August 18	(²)	2
Leine	Nav. Libera-Triestina	August 18	August 18	(²)	140
Sparreholm	Aluminium Line	August 18	August 19	169	(²)
Pastores	United Fruit Co.	August 18	August 20	465	9
Perou	French Line	August 18	August 20	57	739
Tatsuno Maru	North German Lloyd	August 18	August 21	956½	363
Santa Rita	Nippon Yusen Kaisha	August 19	August 19	456	(²)
Bodegraven	Grace Line	August 19	August 19	97	81
Santa Barbara	Royal Netherlands S. S. Co.	August 19	August 20	172	20
San Julian	Grace Line	August 20	August 20	150	298
Castilla	States S. S. Co.	August 20	August 20	16½	(²)
Camden	United Fruit Co.	August 20	August 21	1,022	37
Metapan	United Fruit Co.	August 20	August 21	7,508	(²)
Iriona	United Fruit Co.	August 20	August 21	711	80
Golden Gate	United Fruit Co.	August 20	August 23	52	72
Seattle	Knute Nelson Line	August 21	August 21	20	(²)
Orbita	Hamburg-American Line	August 21	August 21	56	46
Knute Nelson	Pacific Steam Navigation Co.	August 21	August 21	116	132
Drechdijk	Fred Olsen Line	August 21	August 22	(²)	118
	Holland-American Line	August 21	August 22	9	386

* No cargo discharged.

* No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Baralt.....	Royal Netherlands S. S. Co.....	August 21.....	August 22.....	507	
Bridgetown.....	Colombian S. S. Line.....	August 21.....	August 22.....	79	474
Nosa Chief.....	N. O. & S. A. S. S. Co.....	August 21.....	August 22.....	138	233
Balboa.....	Johnson Line.....	August 21.....	August 22.....	51	88
Rialto.....	Nav. Libera-Triestina.....	August 21.....	August 22.....	107	(²)
San Clemente.....	States S. S. Co.....	August 22.....	August 22.....	2	(²)
Essequibo.....	Pacific Steam Navigation Co.....	August 22.....	August 22.....	12	(²)
Carl Legien.....	Hamburg-American Line.....	August 22.....	August 23.....	10	167
Amapala.....	Standard Fruit & S. S. Co.....	August 22.....	August 23.....	111	388
Port Fremantle.....	Commonwealth & Dominion Line.....	August 23.....	August 23.....	58	(²)
Cartago.....	United Fruit Co.....	August 23.....	August 23.....	3½	
Champerico.....	Pacific Steam Navigation Co.....	August 23.....	August 23.....		432
Alaska.....	French Line.....	August 23.....		412	

* No cargo discharged.

* No cargo laded.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Circulars.

Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

To all concerned.—Effective August 23, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., Engineer of Maintenance, will act as Governor.

H. BURGESS,
Governor.

Duties of President of Panama Railroad Company.

PANAMA RAILROAD COMPANY,
OFFICE OF THE PRESIDENT,
BALBOA HEIGHTS, C. Z., August 22, 1930.

To all concerned.—Effective August 23, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., 2d Vice President, will perform such duties of the President as relate to the operation of the Company on the Isthmus.

H. BURGESS,
President.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Panama Mail Steamship Company, Pacific Steam Navigation Company, Grace Line, Chilean Line, Navigazione Generale Italiana, Hamburg-American Line. The Panama Mail and Hamburg-American Line charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 57.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From —	Date.	Vessel.	Line.	For—
August 17	Bokuyo Maru.	Nippon Yusen Kaisha.	Hongkong, China.	August 17	Bokuyo Maru.	Nippon Yusen Kaisha.	Valparaiso, Chile.
August 17	S. A. Perkins.	James Griffiths & Sons.	Seattle, Wash.	August 22	S. A. Perkins.	James Griffiths & Sons.	Santa Rosalia, Mexico.
August 17	Emma Maersk ^{1 28}	Standard Oil Co.	Los Angeles, Calif.	August 19	Emma Maersk ^{1 28}	Standard Oil Co.	Talara, Peru.
August 18	City of Panama ²⁸	Panama Mail S. S. Co.	San Francisco, Calif.	August 19	City of Panama ²⁸	Panama Mail S. S. Co.	Buenaventura, Colombia.
August 22	Suriname.	United Fruit Co.	San Francisco, Calif.	August 23	Suriname.	United Fruit Co.	San Francisco, Calif.
August 22	La Union ²⁹	A. Valdez.	Panama Bay, R. P.	August 22	La Union ²⁹	A. Valdez.	Panama Bay, R. P.
August 22	Dos Hermanos ²⁹	Panama Bay, R. P.	Panama Bay, R. P.	August 22	Dos Hermanos ²⁹	Panama Bay, R. P.	Panama Bay, R. P.
August 23	Real ²⁹	Hans Elliot.	Panama Bay, R. P.	August 23	Real ²⁹	Hans Elliot.	Panama Bay, R. P.
August 23	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	August 23	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
August 23	City of Panama ²⁸	Panama Mail S. S. Co.	Buenaventura, Colombia.				

* Other than ships passing through the Canal.

²⁰ Motor schooner.

²¹ Motor ship.

²² Tanker.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., September 3, 1930. No. 5.

Canal Traffic During August.

During the month of August, 1930, 465 commercial vessels and 19 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,080,230.42, and on the launches \$111.00, or a total tolls collection of \$2,080,341.42.

The daily average of commercial vessels was 15.00 and the average tolls collection was \$67,104.21, as compared with 15.74 and \$70,341.19 for the previous month, and an average of 17.45 transits and \$75,078.64 for August, 1929. The average amount of tolls paid by each of the commercial transits was \$4,473.61, as compared with \$4,468.23 for the month of July, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current calendar year, with the daily averages of transits and tolls, together with the totals for the first 8 months of the calendar years 1929 and 1928:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,576.77	15.74	70,341.19
August.....	465	2,080,230.42	15.00	67,104.21
Total, first 8 months of calendar year 1930.....	3,936	17,509,063.04	16.20	72,053.76
Total, first 8 months of calendar year 1929.....	4,296	18,351,101.91	17.68	75,518.94
Total, first 8 months of calendar year 1928.....	4,184	17,320,819.68	17.14	70,986.96

As compared with the first 8 months of the calendar year 1929, the corresponding period of this year has had 360 fewer transits and \$842,038.87 less tolls.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., August 30, 1930.

No. 742.

Panama Canal, approaches to Pacific entrance, buoy established marking wreck. On August 28, 1930, a red and black, horizontal striped nun buoy was placed in 7 feet of water at low tide, 400 yards and bearing 315 degrees (true) from channel buoy No. 9. This buoy is 80 yards outside of and westward of the Canal prism and marks the stern of a sunken sand barge.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, August 30, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	T ons.	
Alaska	23	14.10	24	6.10	24	13.35	24	French.	French Line.	425.0	55.0	22.2	Talcahuano, Chile.	General.	3,678	6,990
Caldas	22	21.30	24	6.55	24	13.35	24	Colombian.	National Navigation Co.	114.0	21.1	10.0	Buenaventura, Col.	General.	245	211
Sagadahoc	23	20.00	24	7.05	24	14.55	24	American.	Argonaut S. S. Line.	420.5	54.2	25.3	Portland, Oreg.	Steel, general.	6,757	7,345
China Arrow	24	1.30	24	8.15	24	15.30	24	American.	Standard Transp. Co.	468.3	62.7	19.0	Los Angeles, Calif.	Ballast.	10,084	5,357
Benjamin Franklin	24	4.45	24	12.25	24	18.25	25	Norwegian.	Fred Olsen & Co.	452.0	59.5	18.8	Vancouver, B. C.	(⁹)	2,576	9,082
Tamiahua	24	14.50	24	15.00	24	21.50	25	American.	Richfield Oil Co.	500.0	71.2	24.0	Los Angeles, Calif.	Ballast.	11,667	8,542
Challenger	24	19.10	24	19.25	25	9.49	25	American.	Isthmian S. S. Lines	410.0	56.0	21.6	Vancouver, B. C.	Steel, general.	6,047	7,780
Donan	24	12.30	25	6.00	25	13.13	25	German.	North German Lloyd	520.8	53.6	21.6	Los Angeles, Calif.	General.	2,925	11,007
Anna Maersk	24	18.15	25	6.10	25	13.44	25	Danish.	A. P. Moller.	390.6	53.7	16.3	Los Angeles, Calif.	Ballast.	6,012	4,097
Pearlth	24	22.10	25	8.00	25	15.13	25	British.	Barber S. S. Line	464.6	60.3	20.6	Hongkong, China.	General, case oil.	4,264	8,859
Constance	24	23.45	25	7.30	25	14.32	25	American.	Arrow Line.	409.6	54.2	16.6	Seattle, Wash.	Lumber, general.	3,000	6,621
Democracy	25	3.30	25	9.15	25	16.05	25	American.	Nelson Line.	377.0	52.0	17.10	Seattle, Wash.	General, pipe.	2,566	5,434
Axel Johnson	25	00.05	25	10.18	25	16.38	25	Swedish.	Johnson Line.	393.0	52.6	18.3	San Francisco, Cal.	General, cement.	2,318	6,642
Tidewater	24	23.50	25	10.30	25	17.56	25	American.	Tidewater Oil Co.	480.6	66.0	22.0	San Francisco, Cal.	General.	9,734	6,349
Snedstad	25	11.30	25	11.40	25	18.43	26	Norwegian.	A. F. Klaveness & Co.	377.6	54.0	21.6	Adelaide, Australia	Subphur, asphalt.	7,001	6,079
Brimanger	25	13.15	25	13.40	25	20.29	25	Norwegian.	Westfal, Larsen & Co.	309.0	54.0	21.4	N. Westminster, B. C.	Coffee, etc.	5,319	6,853
N. T. Nielson	25	14.45	25	15.05	25	22.45	25	Norwegian.	Melsom & Melsom.	481.7	57.2	29.6	Hobart, Tasmania	Ballast.	10,388	7,609
Alonso	25	14.55	26	6.00	26	12.41	27	American.	Grace Line	360.2	51.6	21.5	Talcahuano, Chile	General.	1,271	5,726
Santa Teresa	26	2.15	26	7.20	26	14.05	27	American.	U. S. Army	490.0	55.4	25.0	San Francisco, Cal.	General.	308	4,086
Grant	26	2.15	26	7.20	26	14.05	27	American.	U. S. Navy	231.0	21.10		Bahoa, C. Z.	Ballast.		
S-13	26	7.35	26	14.48				American.	Richfield Oil Co.	430.2	59.2	19.0	Los Angeles, Calif.	Ballast.	7,978	5,839
Pat Doherty	26	12.05	26	12.15	26	19.23	26	American.	Panama Mail S. S. Co.	360.0	51.0	23.8	San Francisco, Cal.	General, coffee.	1,687	5,710
El Salvador	21	18.20	26	12.35	26	19.48	27	Dutch.	Royal Neth. S. S. Co.	200.0	33.0	12.10	Buenaventura, Col.	General.	1,551	1,183
Barat	25	22.25	26	14.00	26	21.12	26	German.	Roland Line	393.4	54.0	19.0	San Antonio, Chile.	General.	2,674	6,385
Wido	25	22.25	26	14.25	26	20.26	26	German.	Royal Neth. S. S. Co.	361.5	49.6	22.9	Corral, Chile.	General.	4,267	4,759
Haarlem	25	13.55	26	14.40	26	22.02	26	French.	French Line.	470.0	61.2	20.10	Vancouver, B. C.	General.	1,578	10,476
Wyoming	26	11.50	26	15.17	26	22.25	26	American.	Union Oil Co.	435.0	56.0	18.0	Vancouver, B. C.	General.	7,482	5,143
Cathwood	26	14.20	26	15.40	26	23.15	27	American.	Calmar S. S. Line.	410.0	54.2	22.8	Seattle, Wash.	General, steel.	7,859	6,585
Vernar	26	00.30	26	19.15	27	11.35	27	Italian.	Nav. Gen. Italiana	484.0	61.0	26.6	Valparaiso, Chile	General.	840	12,941
Virgilio	25	3.20	27	6.00	27	14.18	27	American.	U. S. Army	390.0	54.2	17.7	New York, N. Y.	Army supplies.	2,273	9,329
Kenowis	22	18.38	27	6.40	27	14.42		American.	National Navigation Co.	107.0	22.0	7.0	San Francisco, Cal.	General.	276	238
Souma	25	17.00	27	6.00	27	15.06	27	Colombian.	Argonaut S. S. Line	436.0	58.0	22.6	Pt. Arnuelles, R. P.	General.	626	163
Caucha	27	6.05	27	7.15	27	15.36	28	American.	U. S. Army	404.0	52.9	20.0	Brooklyn, N. Y.	Army supplies.	2,668	6,754
Oregonian	26	17.25	27	7.30	27	15.27	27	American.	Amer-Hawaiian Line	404.0	52.9	20.0	Seattle, Wash.	General.	1,921	8,218
Silverbell	27	4.55	27	8.30	27	16.29	27	British.	Silver Line, Ltd.	425.6	58.3	17.6	Calcutta, India.	Batching oil.		6,037

¹ Tanker.

² Motor ship.

³ Whaler.

⁴ Transport.

⁵ Submarine.

⁶ General.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rochester.	24	19.00	25	6.19	25	14.30	26	10.00	American.	U. S. Navy.	384.0	64.9	...	Balboa, C. Z.	Cristobal, C. Z.	Cruiser.	...	...	...
British Governor.	24	19.00	25	6.45	25	15.05	25	15.05	British.	British Tankers, Ltd.	440.0	57.0	26.0	Los Angeles, Calif.	Ellesmere Pt., Eng.	Gasoline.	9,300	7,554	5,079
R. J. Hanna.	25	3.25	25	7.13	25	15.55	25	15.55	American.	Standard Oil Co. of Cal.	435.0	56.2	23.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	9,071	7,639	5,135
Cauca.	24	21.25	25	7.23	25	17.20	27	6.00	Colombian.	National Navigation Co.	107.0	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	General.	226	238	163
Toyama Maru.	24	16.30	25	10.19	25	18.15	25	22.50	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	21.0	Iloilo, P. I.	Boston, Mass.	General.	5,502	7,799	5,484
Tai Yin.	25	9.50	25	10.39	25	19.18	25	23.40	Norwegian.	Barber S. S. Lines.	461.4	60.6	24.0	Davao, P. I.	Boston, Mass.	General.	6,083	9,997	7,063
Dalemor.	25	15.25	25	16.26	25	11.25	26	12.55	British.	W. Runciman & Co.	399.9	52.9	26.0	Vancouver, B. C.	Rotterdam, Holland	Wheat.	8,300	5,948	4,245
Yorkmar.	25	18.00	25	19.05	26	11.20	26	11.20	American.	Calmar S. S. Corp.	409.8	54.2	26.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	8,000	6,757	4,802
El Lobo.	25	22.50	26	6.15	26	13.30	26	14.20	British.	C. T. Bowring & Co.	385.2	51.0	24.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil.	6,149	4,851	3,326
Buenos Aires.	25	23.10	26	7.06	26	14.55	26	16.15	Swedish.	Johnson Line.	426.9	56.2	27.0	Honolulu, T. H.	Göteborg, Swed.	General.	7,762	7,591	5,661
Ohioan.	26	6.00	26	7.36	26	15.55	26	15.55	American.	Amer-Hawaiian Line.	407.7	53.7	24.0	Portland, Ore.	Boston, Mass.	General.	5,504	7,103	4,991
Washington Maru.	26	8.45	26	9.43	26	19.10	26	20.35	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	26.0	Portland, Ore.	United Kingdom.	Wheat.	7,798	5,919	4,400
Kambove.	26	9.05	26	10.05	26	20.00	26	21.35	Belgian.	Cia. Maritime de Belge.	399.8	53.2	25.0	Vancouver, B. C.	Hull, England.	Lumber, wheat.	6,739	5,838	4,103
Denver.	26	10.36	26	10.36	26	21.15	...	...	American.	U. S. Navy.	308.9	44.0	...	Balboa, C. Z.	Cristobal, C. Z.	...	...	...	...
Pacific.	26	9.40	26	12.25	26	20.20	26	20.20	British.	Furness, Withy & Co.	435.9	60.2	28.0	Vancouver, B. C.	Glasgow, Scotland.	General.	8,886	9,644	6,967
Walter A.	26	14.40	26	15.40	26	22.10	26	22.10	American.	Luckenbach Line.	446.6	56.1	29.0	Portland, Ore.	Boston, Mass.	Iron ore.	7,769	8,785	6,567
Steele.	27	5.05	27	6.02	27	15.25	27	15.25	American.	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Gasoline.	21,161	15,551	4,297
Los Alamos.	27	2.45	27	6.58	27	15.30	27	17.40	American.	Standard Oil Co. of N. J.	292.3	47.2	24.0	Los Angeles, Calif.	New York, N. Y.	General.	4,248	3,424	2,100
Pacific Cedar.	26	23.55	27	7.13	27	16.55	27	20.10	American.	Dixon S. S. Corp.	399.4	54.7	24.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,350	6,138	4,353
Manhattan.	27	1.00	27	8.17	27	17.45	27	17.45	American.	Redwood Line, Inc.	386.8	52.2	21.0	Portland, Ore.	New Orleans, La.	Lumber, general.	4,559	5,606	4,125
Island.	26	14.30	27	11.09	27	19.11	...	...	American.	Panama Mail S. S. Co.	380.6	48.7	21.0	San Francisco, Cal.	New York, N. Y.	General.	2,410	5,926	4,178
Enavador.	27	10.00	27	11.44	27	19.20	...	...	German.	Hamburg-American Line.	227.0	34.4	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	381	1,572	1,011
Margaret.	27	9.05	27	11.57	27	19.35	28	00.20	Swedish.	Johnson Line.	407.3	54.10	26.0	Vancouver, B. C.	Stockholm, Sweden	General.	5,885	7,048	5,337
Unalga.	24	9.45	28	6.20	28	13.55	28	13.55	American.	Coast Guard Service.	173.6	32.6	15.0	Juneau, Alaska	Baltimore, Md.	Nitrate of soda.	4,592	3,853	2,570
Noes Prince.	27	20.20	28	6.37	28	13.55	28	16.55	American.	N. O. & A. S. S. Co.	324.0	46.2	22.0	Talcahuano, Chile.	New Orleans, La.	General.	720	1,132	741
Manzales.	28	6.40	28	7.54	28	15.10	30	8.55	German.	Roland Line.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	Lumber and pulp	5,545	6,242	4,471
Masmar.	28	10.50	28	11.40	28	18.15	28	18.15	American.	Calmar S. S. Corp.	385.0	51.2	24.0	Portland, Ore.	Philadelphia, Pa.	General.	...	...	...
Florence.	28	11.35	28	12.39	28	19.25	28	19.25	American.	Luckenbach Line.	401.8	52.2	24.0	Portland, Ore.	Mobile, Ala.	General.	5,048	6,002	4,621
York City.	28	11.45	28	12.56	28	20.30	28	20.30	British.	Reardon Smith Line.	411.9	55.0	28.3	N. Westster, B. C.	Manchester, Eng.	General.	9,055	7,038	5,166
La Perla.	28	14.00	29	6.24	29	13.40	30	7.10	American.	United Fruit Co.	325.2	48.1	20.0	San Francisco, Cal.	Cristobal, C. Z.	General.	473	4,033	2,261
Eastern Sun.	29	3.00	29	6.37	29	14.45	29	14.45	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	13,331	9,607	6,551
El Cervo.	29	18.25	29	7.40	29	15.10	29	15.10	British.	C. T. Bowring & Co.	407.4	52.2	25.1	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil.	7,901	6,046	4,326

* Cocoa, coffee, and ivory nuts.

* Lumber and canned goods.

* Coffee, machine cylinder.

* Cruiser.

* Motor ship.

* Tanker.

Cissy	28	23	00	29	8	10	29	16	10	29	18	00	Norwegian	Isbrandtsen Moller Co.	280.5	44.2	20.0	Blain, Wash.	Tampico, Mexico.	Lumber	2,568	2,937	2,080
Acapulca	29	5	10	29	8	24	29	16	00	29	18	00	British	Pacific Steam Nav. Co.	215.7	33.5	13.0	Champerico, Guat.	Cristobal, C. Z.	General	3,363	7,273	7,066
Minnesota	29	4	15	29	8	44	29	16	00	29	16	20	American	Amcr-Hawaiian Line	407.7	53.7	25.0	Scott, Wash.	Boston, Mass.	General	6,107	7,150	5,024
Orduna	29	1	30	29	11	29	29	19	35	29	22	05	British	Pacific Steam Nav. Co.	550.3	67.3	30.0	Tatehuanu, Chile	Liverpool, England	General	7,116	17,140	12,015
I. C. White	30	4	30	30	6	00	30	13	40	30	13	40	American	Pan-Amex. Pet. & Tr. Co.	430.0	59.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	10,800	7,686	5,563
Malmanger	27	17	50	30	6	44	30	14	45	20	14	45	Norwegian	Anglo-Saxon Pet. Co.	425.0	57.0	13.3	Los Angeles, Calif.	Cureaco, D. W. I.	Ballast	7,084	5,635	
Canadian	30	2	15	30	7	15	30	15	55	30	16	45	British	Can. Nat. Steamships	400.0	52.4	20.0	Brisbane, Australia	Montreal, Canada	General	2,716	5,956	4,172
Victor	30	10	30	30	8	44	30	14	50	30	14	50	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Submarine	2,300	10,626	6,680
S-12	30	10	30	30	12	46	30	19	00	31	00	05	American	Grace Line	406.0	64.0	23.5	Valparaiso, Chile	New York, N. Y.	Iron ore	21,654	15,424	4,421
Santa Maria	30	12	05	30	16	46	31	43	20	31	13	20	Swedish	Ore S. S. Corp.	561.1	72.2	35.0	Cruz Grande, Chile	Sparrows Pt., Md.	General lumber	6,430	7,731	5,805
Scotland	30	15	37	30	17	39	31	13	50	21	13	50	American	Williams S. S. Corp.	415.1	55.1	23.4	Seattle, Wash.	Baltimore, Md.				

1 Tanker.

17 Coffee, wood, and hid.s.

18 Copper, lead, and cotton.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.													* DEPARTURES.												
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—	Date.	Vessel.	Line.	For—		Date.	Vessel.	Line.	For—									
August 24	Pastores	United Fruit Co.	Port Limon, Costa Rica.	August 24	No. 9604 ¹⁹	Pan American Airways	Pan Salvador and wayp'ls.	August 24	No. 9137 ¹⁹	Pan American Airways	Pan American Airways		August 24	Pastores	United Fruit Co.	Pan American Airways	Pto. Cabello and wayp'ls.								
August 24	Gaucha	Hamburg-American Line	Tampico via waypoints.	August 24				August 24					August 24	Gaucha	Hamburg-American Line	United Fruit Co.	New York via Habana.								
August 25	Ulua	United Fruit Co.	Puerto Colombia, Colon.	August 24				August 24					August 24	Cartago	United Fruit Co.	Hamburg-American Line	Cartagena, Colombia.								
August 25	Cundinamarca	United Fruit Co.	Barraquilla, Colombia.	August 25				August 25					August 25	Castilla	United Fruit Co.	United Fruit Co.	New Orleans via Bocas.								
August 25	No. 9670 ¹⁹	Pan American Airways	San Salvador and wayp'ls	August 25				August 25					August 25	Eugenia D. ²⁰	C. Davies	C. Davies	Port Limon via Bocas.								
August 25	Grunevald	Hamburg-American Line	Colon, Rep. of Panama.	August 25				August 25					August 25	No. 9635 ¹⁹	Pan American Airways	Bluefields, Nicaragua.									
August 26	No. 945-M ¹⁹	Pan American Airways	Hamburg via waypoints.	August 26				August 26					August 26	No. 9776 ¹⁹	Pan American Airways	Bluefields, Nicaragua.									
August 26	Marstenen	Alumina Line	Talara via waypoints.	August 27				August 27					August 27	Lautaro	Pacific Steam Navigation Co.	San Salvador and wayp'ls.									
August 27	Cristobal	Alumina R. R. S. S. Line	New Orleans and wayp'ls.	August 27				August 27					August 27	Grunevald	Hamburg-American Line	Miami via waypoints.									
August 27	Tela	Elders & Fyffes Line	New York via Haiti.	August 27				August 27					August 27	Ulua	Hamburg-American Line	Have via waypoints.									
August 27	Pearl Marie ²¹	United Fruit Co.	Avonmouth via waypoints.	August 27				August 27					August 27	Ariguan	United Fruit Co.	Tampico and waypoints.									
August 27	Annetta I. ²²	G. I. Bryan	New Orleans via waypoints.	August 27				August 27					August 27	Annetta I. ²²	A. Tagaropolis	Port Limon, Costa Rica.									
August 27	Inapaguina	A. Tagaropolis	Colon, Rep. of Panama.	August 27				August 27					August 27	Marstenen	Alumina Line	Colon, Rep. of Panama.									
August 27	Sixola	United Fruit Co.	Colon, Rep. of Panama.	August 27				August 27					August 27	Pan Marie ²¹	G. I. Bryan	Georgetown and wayp'ls.									
August 27	Mercian	Leyland S. S. Line	New York via Kingston.	August 27				August 27					August 27	No. 300-N ¹⁹	Pan American Airways	Bluefields, Nicaragua.									
August 27	No. 9137 ¹⁹	Pan American Airways	Liverpool via waypoints.	August 28				August 28					August 28	No. 144-M ¹⁹	Pan American Airways	Talara via waypoints.									
August 27	No. 9604 ¹⁹	Pan American Airways	Miami via waypoints.	August 28				August 28					August 28	Sixola	United Fruit Co.	Barraquilla, Colombia.									
August 27	Mary V. ²¹	Pan American Airways	San Salvador via wayp'ls.	August 28				August 28					August 28	Mercian	Leyland S. S. Line	New York via Kingston.									
August 28	Bolivar	E. Hawkins	Colon, Rep. of Panama.	August 28				August 28					August 28	Tela	United Fruit Co.	Tampa, Fla.									
August 28	Castilla	Colombian S. S. Line	New Orleans via waypoints.	August 28				August 28					August 28	Mary V. ²¹	E. Hawkins	Cartagena & Pto. Colon.									
August 28	Standard Fruit & S. S. Co.	Standard Fruit & S. S. Co.	New Orleans via Habana.	August 29				August 29					August 29	Cundinamarca	Scadia Airplane Co.	San Andres, Colombia.									
August 29	Castilla	United Fruit Co.	Puerto Cabello via wayp'ls	August 29				August 29					August 29	No. 9670 ¹⁹	Pan American Airways	Barraquilla, Colombia.									
August 30	No. 144-M ¹⁹	Pan American Airways	Miami via waypoints	August 30				August 30					August 30	Bolivar	Colombian S. S. Line	San Salvador via waypoints.									
August 30	No. 142-M ¹⁹	Pan American Airways	Puerto Cabello via wayp'ls	August 30				August 30					August 30	Dorelian	Leyland S. S. Line	New York via waypoints.									
August 30	No. 9635 ¹⁹	Pan American Airways	Miami via waypoints	August 30				August 30					August 30	Atlantida	Colombian S. S. Line	San Salvador via waypoints.									
August 30	Parismina	United Fruit Co.	San Salvador and wayp'ls	August 30				August 30					August 30	Dora K. ²³	Standard Fruit & S. S. Co.	San Salvador via waypoints.									
August 30	No. 300-N ¹⁹	Pan American Airways	New Orleans and Habana.	August 30				August 30					August 30	Atlantida	Colombian S. S. Line	San Salvador via waypoints.									
August 30	No. 300-N ¹⁹	Pan American Airways	Talara via waypoints.	August 30				August 30					August 30	Dora K. ²³	Standard Fruit & S. S. Co.	San Salvador via waypoints.									
August 30	Nueva Espana ²²	Diez & Garcia	Colon, Rep. of Panama.	August 30				August 30					August 30	Atlantida	Colombian S. S. Line	San Salvador via waypoints.									

19 Air mail carrier.

20 Schooner.

21 Motor schooner.

22 Motor boat.

23 Motor ship.

* Other than ships passing through the Canal.

(Continued on page 68, column 2.)

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, Diesel, at Cristobal only, in bulk, no surcharge.....	Bbl. of 42 gals.	1.80
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.13
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m. 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	} No visitors permitted in nursery.
Nursery.....	
Section "C:"	
Ward 9, Colored, male.....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	} Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 14, White, male, G. U.....	
Section "D:"	
Ward 15, American, male (surgical).....	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 15 years of operation.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will always save time by applying to the nearest American Consul.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 65.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 24.....	Frost ²⁴	West India Oil Co.	Talara, Peru.	August 27.....	West India Oil Co.	Talara, Peru.	
August 27.....	Dos Hermanos ²⁵	A. Valdez.	Panama Bay, R. P.	August 28.....	A. Valdez.	Panama Bay, R. P.	
August 27.....	Guardian.	All America Cables	Callao, Peru.	August 29.....	All America Cables	La Libertad, Ecuador.	
August 28.....	Sambur ²⁵	Hans Elliot.	Panama Bay, R. P.	August 29.....	Hans Elliot.	Panama Bay, R. P.	
August 28.....	Salsgas ¹	S. A. Nansen.	Los Angeles, Calif.	August 30.....	S. A. Nansen.	Los Angeles, Calif.	
August 30.....	Real ²⁵	Hans Elliot.	Panama Bay, R. P.	August 31.....	Hans Elliot.	Panama Bay, R. P.	
				August 31.....	City of Panama ²⁴	Panama Mail S. S. Co.	Corinto, Nicaragua.

* Other than ships passing through the Canal.

²⁵ Motor schooner.

²⁴ Motor ship.

¹ Tanker.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office

at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., September 10, 1930. No. 6.

Comparison of Canal Traffic in August, 1930, with August Traffic in Previous Years.

The traffic through the Panama Canal during the month of August, 1930, showed a decrease as compared with the preceding month, and a large decrease as compared with August, 1929.

The 465 transits in August this year are fewer by 76, or 14.0 per cent, than the 541 transits in the corresponding month a year ago, while the net tonnage, Panama Canal measurement, aggregating 2,345,573 tons, is less by 213,166 tons, or 8.3 per cent, than the total of 2,558,739 tons in August, 1929. The cargo tonnage of 2,148,469 tons for August, 1930, shows a decline of 532,261 tons, or 19.9 per cent, from the total of 2,680,730 tons passing through the Canal in August, 1929.

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of August each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of August.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	* 24	89,894	110,884	1915.....	* 102	* 361,197	* 465,567
1915.....	155	492,752	571,475	1916.....	63	199,687	257,843
1916.....	137	443,415	505,673	1917.....	150	483,213	589,213
1917.....	170	511,648	579,340	1918.....	172	547,839	627,669
1918.....	158	452,005	533,703	1919.....	169	510,416	576,385
1919.....	188	586,111	715,724	1920.....	206	712,170	781,208
1920.....	266	951,345	1,040,740	1921.....	241	951,323	966,691
1921.....	236	965,276	839,273	1922.....	228	951,455	907,075
1922.....	257	1,084,133	1,165,950	1923.....	331	1,550,482	1,630,656
1923.....	454	2,232,590	2,168,750	1924.....	436	2,179,073	2,249,559
1924.....	372	1,901,895	1,958,479	1925.....	389	1,904,596	1,996,570
1925.....	372	1,779,627	1,912,217	1926.....	433	2,064,549	2,169,787
1926.....	464	2,230,905	2,321,697	1927.....	456	2,185,651	2,312,351
1927.....	543	2,513,614	2,429,947	1928.....	538	2,454,886	2,469,226
1928.....	526	2,437,246	2,425,336	1929.....	534	2,468,493	2,555,250
1929.....	541	2,558,739	2,680,730	1930.....	515	2,498,385	2,502,519
1930.....	465	2,345,573	2,148,469	.....	* 492	* 2,439,647	* 2,370,483

* Canal opened August 15, 1914.

* Average for 10½ months of fiscal year ended June 30, 1915.

* First 8 months of calendar year 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 6, 1930.

No. 752.

Ecuador, La Plata Island light, reported extinguished. The master of the S. S. *Rhodopis* reports that on August 31, 1930, La Plata Island light was extinguished.

Approximate position, Lat. 1° 15' 50" S., Long. 81° 06' 00" W.

(See Notice to Mariners No. 736, August 19, 1930.)

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 6, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Canadian																			
Planter.....	30	18.55	31	6.10	31	12.58	31	14.00	British.....	Can. Nat. Steamships	400.0	52.0	15.6	Montreal, Canada	Vancouver, B. C.	General	1,200	5,858	4,108
Cerro.....	27	12.20	31	9.00	31	16.16	31	18.00	German.....	North German Lloyd	227.0	34.0	13.6	Cristobal, C. Z.	Guayaquil, Ecuador	General	96	1,572	1,011
Santa Enlilia	31	7.35	31	9.00	31	16.13	31	21.05	American.....	Norton, Lilly & Co.	251.0	43.6	23.0	Baltimore, Md.	Kahului, Hawaii.....	General	3,043	2,823	1,730
Mathew																			
Luckenbach.....	31	9.25	31	9.40	31	16.51	31	18.00	American.....	Luckenbach Line.....	434.0	57.0	22.8	Houston, Texas.....	Tacoma, Wash.	General	4,039	7,977	5,764
Peter Kerr.....	30	20.40	31	10.20	31	17.42	31	18.50	American.....	Quaker Line.....	415.0	55.6	24.6	Philadelphia, Pa.....	Vancouver, B. C.	General	7,666	7,704	5,696
Anasis.....	31	6.35	31	12.25	31	19.13	1	1.14	German.....	Hamburg-American Line	438.0	55.0	22.6	Hamburg, Germany	Valparaiso, Chile.	General	4,048	7,286	5,174
New Jersey 1.....	31	16.50	31	17.10	1	9.29	1	10.54	American.....	The Texas Co.....	416.8	56.1	19.0	New York, N. Y.	Los Angeles, Calif	Ballast.		6,925	5,014
Sir Osborn																			
Holmden 1.....	31	15.55	1	6.10	1	12.50	1	16.30	Norwegian.....	Anglo-Saxon Pet. Co.....	471.0	64.4	18.0	Baltimore, Md.....	Los Angeles, Calif.	Ballast.		9,562	6,604
Sir James Clark																			
Rees 2.....	31	16.43	1	7.15	1	14.10	1	18.00	Norwegian.....	Rasmussen & Konow.....	537.6	74.3	18.0	Sandefjord, Norway	Los Angeles, Calif	Ballast.		16,364	11,790
Robin Adair.....	1	10.35	1	10.45	1	17.35	1	19.00	American.....	Isthmian S. Lines.....	424.8	65.2	22.3	Baltimore, Md.....	Tacoma, Wash.	Steel, general.	5,932	7,470	5,529
Hartford.....	1	11.05	1	11.20	1	18.50	1	23.50	British.....	Federal Steam Nav. Co.	520.0	64.0	30.0	Avonmouth, Eng.	N. Plymouth, N. Z.	General	9,973	12,933	8,991
Antiope.....	1	13.47	1	17.25	2	9.02	2	10.24	British.....	Andrew Weir & Co.....	401.0	54.2	25.4	Barry, England.....	Auckland, N. Z.	Phosphate.	7,462	6,229	4,612
No. 31076 3.....																			
Gertrude																			
Kellogg 1.....	1	18.45	2	6.05	2	15.30	2	16.35	American.....	Kellogg S. S. Corp.....	391.9	51.2	23.0	Montreal, Canada	Los Angeles, Calif	Ballast.		5,393	3,719
Svalder 1 2.....	1	20.15	2	6.05	2	16.16	2	17.20	Norwegian.....	Pet. Stor. & Fin. Corp.	403.3	55.3	18.8	Liverpool, England	Los Angeles, Calif	Ballast.		6,406	4,336
Tiger 1.....	2	2.25	2	7.15	2	15.57	2	16.45	American.....	Standard Transp. Co.	410.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif	Ballast.		8,201	6,207
Willpolo.....	2	2.25	2	7.30	2	16.44	2	17.55	American.....	Williams Line.....	386.8	52.2	17.3	Charleston, S. C.	Seattle, Wash.	General.	1,839	5,680	4,080
Oak Branch.....	1	22.20	2	8.15	2	17.30	2	18.35	British.....	F. & W. Risdon.....	335.0	50.0	21.6	North Shields, Eng.	Valparaiso, Chile.	General.	3,650	5,209	4,035
Point Montara.....	2	7.45	2	8.45	2	18.23	2	19.45	American.....	Swayne & Hoyt.....	324.0	46.2	21.0	Tampa, Fla.....	Vancouver, B. C.	General.	2,685	3,984	2,612
S-11 4.....																			
S-12 4.....																			
S-20 4.....																			
City of Elwood.....	2	9.10	2	10.40	2	19.05	2	20.55	American.....	U. S. Navy.....	219.3	20.8		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Denver 5.....	26	21.15	2	10.40	2	19.25	2	20.40	American.....	Roosevelt S. S. Co., S. B.	395.6	55.0	24.0	Newport News, Va.	Shanghai, China.	General.	5,836	7,344	5,283
Pacific																			
Redwood.....																			
Mandinga 6.....	2	11.45	2	12.00	2	19.55	2	21.10	American.....	Dimon S. S. Line.....	409.6	54.2	17.0	Philadelphia, Pa.....	Tacoma, Wash.	General.	3,759	6,537	4,845
Hawaiian.....	2	19.30	2	19.45	3	8.06	3	9.36	American.....	Stand. Fruit & S. S. Co.	404.0	53.0	16.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	8		
Boskoop.....	2	10.05	3	6.10	3	13.41	3	21.35	Dutch.....	Amer.-Hawaiian Line.	400.0	58.0	20.0	Boston, Mass.	Seattle, Wash.	General	1,890	6,766	4,767
Sietola 7.....	3	6.25	3	6.25	3	14.32	3	18.40	American.....	Royal Neth. S. S. Co.	400.0	58.0	20.0	Hamburg, Germany	Corral, Chile.	General	2,351	7,817	6,097
Lumen 1 2.....	3	5.55	3	7.20	3	15.35	3	18.40	British.....	U. S. Navy.....	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.			
Robert																			
Luckenbach.....	3	9.05	3	9.30	3	16.20	3	17.30	American.....	Anglo-Saxon Pet. Co.....	429.0	54.0	23.0	Liverpool, England	Balboa, C. Z.	Ballast.		6,045	4,843
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74 Tanker.																			

Tug.

Launch.

Cruiser.

Submarine.

Barge.

Motor ship.

Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.				
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.			
Canadian Challenger	2	11 15	2	12 05	2	18 43	2	22 55	British	Can. Nat. Steamships	400.0	52.0	13.0	Auckland, N. Z.	Montreal, Canada	General	1,030	5,439	3,330			
Gregata	2	15 00	2	15 31	2	22 25	3	6 30	British	Donaldson Bros., Ltd	425.0	56.0	30.6	Victoria, B. C.	Glasgow, Scotland	General	7,870	7,827	5,442			
Commander McCauley	3	3 43	3	6 05	3	13 35	3	13 35	American	U. S. Navy	416.8	56.1	25.0	Balboa, C. Z.	Gatun Lake, C. Z.	Natural gasoline	7,501	6,945	5,032			
Illinois	2	23 00	3	6 34	3	13 05	3	13 05	Danzig	The Texas Co.	470.0	63.2	27.0	Los Angeles, Calif	Hamburg, Germany	Naphtha	11,300	9,248	6,310			
Chlo	3	7 20	3	7 20	3	17 15	3	17 15	American	W. Fankeloff Rhederei	425.0	57.2	28.0	Talara, Peru	Gatun Lake, C. Z.	Gasoline	9,206	7,481	5,004			
Thomas H. Wheeler	2	23 40	3	8 03	3	16 10	3	19 05	Chilean	Standard Shipping Co.	432.8	56.2	22.0	Long Beach, Calif	New York, N. Y.	General	7,235	7,704	4,705			
Aconcagua	3	6 22	3	8 13	3	17 30	3	21 15	American	Cia. Sud. Amer. de Vap.	435.5	53.2	27.0	Valparaiso, Chile	New York, N. Y.	General	7,073	7,523	5,154			
Rhodan	3	2 45	3	8 21	3	18 30	3	18 30	German	Hamburg-American Line	324.0	48.2	23.0	Portland, Ore.	Hamburg, Germany	General	3,475	3,984	2,617			
Poist Reyes	2	4 00	3	9 21	3	18 15	3	10 15	American	Swayze & Hoyt	174.2	27.6	10.3	Los Angeles, Calif	Boston, Mass.	Ballast	391	263				
Arcadia	3	2 30	3	9 30	3	19 30	3	20 30	British	Mrs. H. R. Hardwick	423.0	56.0	25.0	Vancouver, B. C.	Boston, Mass.	Lumber, general	8,300	6,267	4,574			
Shaban	3	5 10	3	10 05	3	19 50	3	9 40	German	Canadian Transp. Co.	227.5	34.4	13.1	Quayquil, Ecuador	Avonmouth, Eng.	General	3,309	3,233	1,711			
Durazo	3	6 11	3	10 47	3	20 10	3	20 10	American	Hamburg-American Line	415.1	55.7	25.0	N.W. street, B. C.	Cristobal, C. Z.	Lumber, general	4,818	7,649	5,720			
San Luis	3	5 00	3	11 09	3	21 18	4	1 55	American	States S. S. Co.	500.0	63.2	29.0	Estero Bay, Calif.	Philadelphia, Pa.	(+)	13,641	11,225	7,913			
F. H. Hilman	3	6 20	3	12 02	3	21 40	4	1 10	Norwegian.	Standard Oil Co. of Cal	425.5	55.3	26.0	Vancouver, B. C.	Wilmington, Del.	Wheat, general	8,191	7,553	5,673			
George	3	8 45	3	13 07	3	22 05	3	22 05	American	Fred Olsen & Co.	480.6	60.0	29.0	Los Angeles, Calif	Hull, England	Gasoline	13,621	9,619	6,456			
Washington	3	15 00	3	16 07	3	23 25	4	3 20	French	Sun Oil Co.	409.3	53.5	20.0	Noumea, New Cal.	Chester, Pa.	General	2,645	7,677	5,633			
Smoll	3	18 10	3	19 05	4	11 40	4	12 40	British	Messageries Maritimes	388.4	53.0	24.5	Tecunilla, Chile	Marseilles, France	Nitrates	7,490	5,274	3,654			
Ville de Strasbourg	3	23 00	4	6 05	4	16 15	4	16 15	American	Larrinaga & Co., Ltd	550.3	72.2	34.3	Cruz Grande, Chile	Jacksonville, Fla.	Iron ore	21,634	15,551	9,297			
Miguel de Larrea	4	5 30	4	6 40	4	17 20	5	12 15	Dutch.	Ore S. S. Corp	450.0	58.0	25.2	Corral, Chile	Baltimore, Md.	General	8,900	7,840	5,506			
Marore	4	6 00	4	7 24	4	16 20	4	15 20	Norwegian.	Royal Neth. S. S. Co.	381.2	54.7	25.0	Vancouver, B. C.	Hamburg, Germany	Lumber, general	6,800	6,083	4,561			
Benneton	2	8 30	3	10 47	4	17 20	4	17 20	American	Canadian Transp. Co	198.0	30.0	13.0	Portland, Ore.	Dover, England	Light ship	3,640	7,330	5,233			
Chr. Knudsen	4	10 30	4	11 11	4	18 20	4	18 20	American	Dept. of Commerce	395.5	55.0	21.5	Vancouver, B. C.	New York, N. Y.	General	4,805	12,846	9,439			
Fire Island	4	13 20	4	13 57	4	20 38	5	10 25	British	Quaker Line	525.0	61.4	24.0	Auckland, N. Z.	Philadelphia, Pa.	Frozen, general	15,331	11,719	8,619			
San Pedro	4	17 00	5	6 03	5	14 40	5	14 40	American	N. Z. Shipping Co.	513.5	68.2	30.0	Los Angeles, Calif	London, England	Gasoline	15,331	11,719	8,619			
Botoma	4	20 30	5	6 42	5	15 55	5	15 55	British	Standard Oil Co of Cal	404.0	55.0	25.0	Vancouver, B. C.	Gasoline							
California	5	3 31	5	7 41	5	17 05	5	17 05	American	Beneston Line	494.6	63.9	24.0	Seattle, Wash.	Hull, England	General	8,403	7,075	5,308			
Standard	5	8 05	5	8 50	5	17 55	5	17 55	American	Amer.-Hawaiian Line	473.0	54.0	27.0	Conchal, Chile	Boston, Mass.	General	5,224	6,777	4,761			
Cressington	5	10 00	5	10 46	5	18 15	5	18 15	French	Growth Line	375.0	51.7	23.4	Los Angeles, Calif	Haarlem, France	General	8,750	7,469	5,020			
Yardua	5	11 15	5	12 16	5	20 10	5	20 10	American	Co. Warrison & Co.	409.6	54.2	24.9	Willapa Har., Wash.	Haarlem, France	Benzine	6,290	5,937	3,537			
Helen Whittier	5	11 15	5	12 16	5	20 10	5	20 10	American	Christensen S. S. Co.	409.6	54.2	24.9	Willapa Har., Wash.	New York, N. Y.	Lumber	7,250	6,667	4,949			
Tanker.											14 Yacht.											
											12 Motor ship.											
											12 Launch.											

13 Kettleman crude oil.

14 Yacht.

15 Motor ship.

16 Launch.

17 Tanker.

Pacific Oak.....	5 12 20	5 13 11	5 22 40	5 22 50	American.....	Dimon S. S. Corp.....	409 7 54 2 34.0	Seattle, Wash.....	New York, N. Y.....	Lumber, general.....	7 097 6 687 4 974
Peru.....	5 13 30	5 14 53	5 22 50	5 22 50	Danish.....	East Asiatic Co.....	453 3 55 2 28.4	Los Angeles, Calif.....	Copenhagen, Den.....	Lumber, general.....	9 534 7 407 5 860
Vendemia.....	5 13 30	5 14 53	5 22 50	5 22 50	French.....	Cie. Atlantic Co.....	453 3 55 2 28.4	San Francisco, Calif.....	London, Eng.....	Gasoline.....	9 534 7 407 5 860
Solana.....	6 00 20	6 02 10	6 14 43	6 14 43	American.....	Associated Oil Co., Nav.....	419 5 56 5 26.0	San Francisco, Calif.....	New York, N. Y.....	Gasoline, l. b. oil.....	9 029 7 069 5 025
Canadian Miller.....	6 00 20	6 01 00	6 10 50	6 10 50	British.....	Can. Nat. Steamships.....	400 0 52 3 24.0	San Francisco, Calif.....	Montreal, Canada.....	Lumber, general.....	6 198 5 892 4 186
Liberator.....	6 00 43	6 13 55	6 22 15	6 22 15	American.....	Tampa Intercoast Co.....	410 0 56 0 23.0	Manila, P. I.....	New Orleans, La.....	(15)	9 787 8 204 6 196

1 Tanker.

21 For orders.

13 Sugar, copra, coconut oil, pineapples, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
August 31	Utha	United Fruit Co.	Port Limon, Costa Rica.	August 31	No. 9664 ¹⁷	Pan American Airways	San Salvador and wayp'ts.
August 31	C. C. Acme ¹⁶	R. C. Foster	Cartagena, Colombia.	August 31	No. 9137 ¹⁷	Pan American Airways	Miami via wayports.
September 1	Sinon Bolivar	Royal Netherlands S. S. Co.	Hamburg via wayports.	August 31	Utha	United Fruit Co.	New York via Habana.
September 1	Darian	Leyland S. S. Line	Liverpool via wayports.	August 31	Cristobal	Panama R. R. S. S. Line	New Orleans and wayp'ts.
September 1	Calamares	United Fruit Co.	San Salvador via Habana.	September 1	Paranaquia ¹⁸	Anaehuena	Colon, Rep. of Panama.
September 1	No. 9670 ¹⁷	Pan American Airways	Barranquilla and wayp'ts.	September 1	Darien C-35 ¹⁷	United Fruit Co.	Cienfuegos, Cuba.
September 1	Shell Eastern Petroleum Co.	Shell Eastern Petroleum Co.	Curacao, D. W. I.	September 2	No. 9685 ¹⁷	Pan American Airways	San Salvador and wayp'ts.
September 2	Swiftwind	Hamburg-American Line	Hamburg via wayports.	September 2	Sinon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
September 2	Orinoco	United Fruit Co.	New York via Kingston.	September 2	Calamares	Pan American Airways	Port Limon, Costa Rica.
September 2	Tela	United Fruit Co.	Puerto Colombia.	September 2	No. 142-M ¹⁷	Hamburg-American Line	Port Limon, Costa Rica.
September 2	Macoris	Cie. Gle. Transatlantique	Havre via wayports.	September 2	Orinoco	R. C. Foster	San Andres, Colombia.
September 2	No. 945-M ¹⁷	Pan American-Grace Airways	Talara via wayports.	September 2	Inapaquia ¹⁸	Sheal Eastern Petroleum Co.	Curacao, D. W. I.
September 2	No. 9776 ¹⁷	Pan American Airways	Miami via wayports.	September 2	No. 144-M ¹⁷	Pan American Airways	Barranquilla, Colombia.
September 2	No. 9664 ¹⁷	Pan American Airways	San Salvador via wayp'ts.	September 2	Iriona	United Fruit Co.	Puerto Colombia.
September 2	Baraca	Colombian S. S. Line	New York via wayports.	September 2	Zacapa	United Fruit Co.	New York via wayports.
September 2	Pearl Marie ¹⁶	G. I. Bryan	Colon, Rep. of Panama.	September 2	Pearl Marie ¹⁶	French Line	Bluefields, Nicaragua.
September 2	Sinon Bolivar	Royal Netherlands S. S. Co	Port Limon, Costa Rica.	September 2	Macoris	French Line	Havre via wayports.
September 2	Anapala	Standard Fruit & S. S. Co.	New Orleans and Habana.	September 2	V-5 ¹⁹	U. S. Navy	High seas.
September 2	Inapaquia ¹⁸	United Fruit Co.	Colon, Rep. of Panama.	September 2	Anaehuena ¹⁸	United Fruit Co.	Colon, Rep. of Panama.
September 2	Heredia	A. Tagaropolis	Colon, Rep. of Panama.	September 2	Baraca	Colombian S. S. Line	Barranquilla and wayp'ts.
September 2	Orinoco	Hamburg-American Line	New Orleans and Habana.	September 2	Darien C-35 ¹⁷	Scadta Airplane Co.	Colon, Rep. of Panama.
September 2	Nueva Espana ¹⁸	Port Limon, Costa Rica.	Colon, Rep. of Panama.	September 2	Nueva Espana ¹⁸	Diez & Garcia	Colon, Rep. of Panama.
September 2	Marcus de Comillas	Spanish S. S. Line	Barcelona and wayports.	September 2	Tela	United Fruit Co.	New Orleans and wayp'ts.
September 2	U. S. Navy	U. S. Navy	High seas.	September 2	Sinon Bolivar	Royal Netherlands S. S. Co.	Amsterdam and wayp'ts.
September 2	Pan American Airways	Pan American Airways	Pto. Caballo and wayp'ts.	September 2	Anapala	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
September 2	No. 144-M ¹⁷	Pan American Airways	San Salvador and wayp'ts.	September 2	Inapaquia ¹⁸	A. Tagaropolis	Colon, Rep. of Panama.
September 2	No. 9685 ¹⁷	Pan American Airways	Talara via wayports.	September 2	Inapaquia ¹⁸	A. Tagaropolis	Colon, Rep. of Panama.
September 2	No. 300-N ¹⁷	Pan American-Grace Airways	Talara via wayports.	September 2	Inapaquia ¹⁸	A. Tagaropolis	Colon, Rep. of Panama.

19 Motor schooner.

17 Air mail carrier.

18 Motor boat.

PORT OF BALBOA.

August 5.....	San Jose.....	United Fruit Co.....	San Francisco, Calif.	August 6.....	San Jose.....	United Fruit Co.....	San Francisco, Calif.
August 5.....	La Union ²⁰	A. Valdez.....	Panama Bay, R. P.	August 5.....	La Union ²⁰	A. Valdez.....	Panama Bay, R. P.
August 5.....	Dos Hermanos ²⁰	A. Valdez.....	Panama Bay, R. P.	August 6.....	Dos Hermanos ²⁰	A. Valdez.....	Panama Bay, R. P.
August 5.....	Real ²⁰	Hans Elliot.....	Panama Bay, R. P.	August 6.....	Real ²⁰	Hans Elliot.....	Panama Bay, R. P.
August 5.....	Nueva Panama ²¹	Hans Elliot.....	Panama Bay, R. P.				

20 Motor schooner.

21 Motor ship

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in August, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for August, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	77	426,673	325,907	526,209	325,991	\$361,612.16	191,501
East coast of United States to west coast of South America:							
British	3	12,375	9,776	16,799	10,342	10,700.97	5,023
Chilean	2	9,377	6,899	14,620	7,952	8,623.75	3,206
Danish	1	4,558	2,734	4,553	2,785	3,417.50	2,268
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States	12	56,059	43,041	76,520	42,959	44,092.33	16,059
Total	20	91,286	69,936	143,168	72,800	73,254.79	26,556
Europe to west coast of United States:							
British	4	24,703	20,466	32,696	20,029	21,597.78	15,519
Danish	1	4,097	3,355	5,752	3,406	2,949.84	.....
French	1	6,907	6,693	9,117	6,732	5,019.75	.....
German	2	12,038	9,412	15,396	9,295	10,157.30	2,925
Norwegian	5	26,056	20,441	33,802	20,047	18,612.27	8,284
Panamanian	1	6,650	5,650	8,947	5,651	4,788.00	.....
Swedish	2	10,655	6,559	10,847	8,271	7,975.34	7,094
United States	2	16,532	13,093	21,083	12,961	11,903.04	.....
Total	18	107,638	85,669	137,640	86,392	83,003.32	33,822
Europe to west coast of Canada:							
Belgian	1	4,976	4,568	7,138	3,988	5,710.00	5,200
British	6	29,102	18,177	29,808	18,138	22,718.35	12,755
Danish	2	10,655	8,442	13,297	8,490	10,552.50	8,945
Dutch	2	13,679	10,642	16,989	10,604	13,302.50	4,957
French	2	14,538	8,464	15,989	9,073	10,580.00	3,415
German	2	13,648	8,619	15,048	9,070	10,773.75	8,735
Italian	1	6,025	5,056	7,098	4,498	6,320.00	2,910
Norwegian	1	6,140	5,261	8,518	5,341	6,576.25	2,576
Swedish	1	4,860	2,781	4,960	3,665	3,476.25	2,318
Total	18	103,623	72,010	118,845	72,867	90,009.60	51,811
Europe to west coast of South America:							
British	3	19,151	14,144	24,124	14,919	17,680.00	12,211
Danzig	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch	2	9,640	5,431	9,243	5,630	6,783.75	7,931
French	1	4,854	3,224	5,399	3,225	4,030.00	3,678
German	5	24,612	19,221	30,781	18,988	24,026.25	19,605
Italian	2	16,845	10,690	23,721	12,808	13,362.50	3,034
Norwegian	2	8,442	5,785	10,009	5,781	5,945.07	7,327
Total	16	89,854	63,841	112,217	66,401	76,375.77	53,786
East coast of United States to Far East:							
British	6	36,209	21,245	35,481	21,119	26,556.25	25,583
Japanese	3	14,513	13,097	18,683	12,800	16,119.10	18,844
Norwegian	2	11,315	6,455	11,048	6,556	8,068.75	10,274
United States	4	23,988	17,321	27,808	17,297	21,651.25	32,338
Total	15	86,025	58,118	93,020	57,772	72,395.35	87,039
East coast of United States to Australasia:							
British	7	42,200	29,762	47,377	30,033	37,202.50	21,866
Norwegian	3	14,173	7,876	13,430	7,845	9,845.00	21,865
United States	2	8,061	5,943	9,603	5,937	7,428.75	12,645
Total	12	64,434	43,581	70,410	43,815	54,476.25	56,376

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	58,757	42,286	69,747	43,141	\$52,857.50	38,377
French.....	1	5,364	4,237	7,139	4,335	5,358.75	1,484
Norwegian.....	2	20,285	16,007	27,317	16,465	16,317.97	.....
Swedish.....	1	6,190	3,278	5,841	4,083	4,097.50	4,479
Total.....	11	90,596	65,858	110,044	68,024	78,631.72	44,340
Cristobal to west coast of South America:							
Colombian.....	2	326	328	466	332	391.20	451
Dutch.....	2	1,484	588	1,560	646	735.00	204
German.....	7	5,941	4,003	7,541	4,112	5,003.75	1,424
Total.....	11	7,751	4,919	9,567	5,090	6,129.95	2,079
East coast of United States to Philippine Islands:							
British.....	3	18,952	12,263	21,390	12,283	15,328.75	13,972
Norwegian.....	1	3,735	2,075	3,549	2,098	2,593.75	5,400
United States.....	1	6,183	5,780	7,717	5,791	7,225.00	8,698
Total.....	5	28,870	20,118	32,656	20,172	25,147.50	28,070
Foreign vessels in ballast— United States inter- coastal:							
British.....	3	13,750	12,039	21,754	12,926	9,909.09	.....
Norwegian.....	1	4,722	2,728	4,624	2,765	3,399.84	.....
Total.....	4	18,472	14,767	26,378	15,691	13,308.93	.....
Cristobal to west coast of United States:							
United States.....	4	8,310	7,437	11,290	7,332	8,189.75	1,755
East coast of South America to west coast of United States:							
Norwegian.....	1	5,246	2,949	4,883	2,999	3,686.25	5,319
United States.....	2	10,039	7,594	11,994	7,540	7,998.98	5,476
Total.....	3	15,285	10,543	16,877	10,539	11,685.23	10,795
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	2,107
East coast of United States to west coast of Canada:							
United States.....	2	11,261	9,230	13,277	9,214	11,304.45	12,159
East coast of United States to Hawaii:							
United States.....	2	3,470	3,070	5,294	3,084	3,837.50	6,307
Around the world:							
United States.....	2	20,565	15,731	26,048	15,731	19,663.75	7,302
Canadian intercoastal:							
British.....	2	8,290	6,563	11,156	6,887	8,203.75	3,200
East coast of Canada to west coast of South America:							
British.....	2	12,766	10,909	19,144	10,994	9,191.52	.....
East coast of Canada to Aus- tralias:							
British.....	2	8,695	6,571	10,950	6,694	8,213.75	6,182
East coast of Central America to west coast of South America:							
British.....	1	3,892	3,363	5,582	3,370	4,203.75	7,619
Colombian.....	1	124	113	207	109	141.25	245
Total.....	2	4,016	3,476	5,789	3,479	4,345.00	7,864
West Indies to west coast of Canada:							
British.....	2	8,909	6,708	10,539	6,751	8,385.00	11,014
Europe to west coast of Cen- tral America:							
German.....	1	2,967	1,832	3,034	1,786	2,290.00	1,697
Panamanian.....	1	101	103	203	101	121.20	150
Total.....	2	3,068	1,935	3,237	1,887	2,411.20	1,847

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to Far East:							
Japanese	2	13,452	9,617	16,893	10,241	\$12,021.25	7,313
East coast of Canada to west coast of United States:							
British	1	5,185	3,007	4,867	2,991	3,758.75	4,000
East coast of Central America to Australasia:							
Norwegian	1	4,534	2,465	4,114	2,453	3,081.25	7,001
South American intercoastal:							
Norwegian	1	1,189	1,061	1,657	944	856.08	.....
Cristobal to Balboa:							
Panamanian	1	59	54	94	54	67.50	48
West Indies to Balboa:							
United States	1	2,235	1,906	2,991	1,739	2,382.50	2,927
West Indies to west coast of South America:							
British	1	3,326	2,872	4,800	2,949	3,590.00	4,506
Africa to Far East:							
British	1	5,406	2,901	4,745	2,877	3,626.25	7,700
Grand total, August, 1930	244	1,258,181	933,348	1,558,747	944,570	1,062,369.82	679,407
Grand total, August, 1929	267	1,307,072	971,968	1,607,157	975,948	1,119,659.40	858,661
Grand total, August, 1928	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States	73	393,739	300,519	486,887	300,600	\$375,648.75	520,184
West coast of South America east coast of United States:							
British	7	29,310	22,836	38,390	23,463	28,545.00	42,869
Chilean	1	4,672	3,433	7,310	3,976	4,291.25	1,839
Danzig	1	8,167	5,485	8,952	5,096	6,856.25	13,000
Swedish	1	4,421	3,743	15,339	4,377	4,678.75	21,654
United States	16	77,671	60,954	106,408	60,903	75,980.70	141,380
Total	26	124,241	96,451	176,399	97,815	120,351.95	220,742
West coast of Canada to Europe:							
Belgian	2	8,133	6,957	10,095	6,776	8,696.25	13,759
British	8	44,829	31,858	51,588	32,107	39,822.50	65,525
Danish	2	10,966	9,411	13,550	9,441	11,763.75	17,572
Dutch	1	8,266	6,197	10,220	6,385	7,746.25	10,296
French	1	7,146	4,020	8,068	4,497	5,025.00	7,877
German	1	7,252	4,792	8,269	5,018	5,990.00	7,914
Italian	1	6,497	4,905	8,124	5,128	6,131.25	8,902
Norwegian	2	11,491	9,186	14,584	9,217	11,482.50	18,280
Swedish	2	10,256	5,751	10,170	7,412	7,188.75	11,464
United States	2	10,900	6,930	11,374	6,900	8,662.50	15,334
Total	22	125,736	90,007	146,042	92,881	112,508.75	176,923
West coast of United States to Europe:							
British	10	46,918	37,831	60,591	37,544	47,185.15	82,621
Dutch	1	4,317	3,492	5,792	3,379	4,365.00	7,416
French	1	5,385	4,595	7,650	4,435	5,743.75	9,210
German	3	14,736	10,199	17,717	10,292	12,748.75	21,957
Japanese	3	13,514	12,203	17,510	12,542	15,087.50	22,749
Norwegian	2	11,827	9,999	16,732	9,943	12,498.75	21,967
Swedish	1	3,532	2,411	4,066	3,144	3,013.75	6,000
Total	21	100,229	80,730	130,058	81,279	100,642.65	171,920
West coast of South America to Europe:							
British	5	30,147	23,426	38,866	24,115	29,282.50	34,501
Danzig	1	6,127	5,268	8,939	5,007	6,585.00	11,330
Dutch	3	15,926	8,510	14,710	8,890	10,637.50	16,989
French	1	4,834	3,223	5,390	3,219	4,028.75	7,708
German	6	27,731	20,201	32,513	19,782	24,030.54	35,489
Norwegian	2	7,640	5,349	8,868	5,300	6,686.25	10,855
Total	18	92,405	65,977	109,286	66,313	81,250.54	116,872

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Cristobal:							
Colombian.....	3	450	441	673	441	\$534.85	361
Dutch.....	2	1,434	538	1,560	646	735.00	1,115
German.....	5	4,232	2,879	5,398	2,974	3,598.75	3,341
Total.....	10	6,166	3,908	7,631	4,061	4,868.60	4,817
Australasia to Europe:							
British.....	8	68,810	48,178	81,515	49,778	60,222.50	43,193
Philippine Islands to east coast of United States:							
British.....	1	6,726	5,580	9,031	5,376	6,975.00	12,652
Japanese.....	3	15,600	13,108	19,908	12,910	16,218.75	20,212
Norwegian.....	1	7,063	4,017	6,744	4,109	5,021.25	5,979
United States.....	1	6,100	4,872	7,610	4,872	6,090.00	5,835
Total.....	6	35,489	27,577	43,293	27,267	34,305.00	44,678
Hawaii to east coast of United States:							
United States.....	3	14,440	10,377	16,751	10,410	12,971.25	23,141
West coast of United States to Cristobal:							
United States.....	3	6,761	6,270	10,216	6,171	7,734.45	1,526
West coast of Canada to east coast of United States:							
Norwegian.....	2	8,462	5,015	8,478	5,088	6,268.75	13,143
United States.....	1	4,297	2,986	4,747	2,955	3,732.50	4,542
Total.....	3	12,759	8,001	13,225	8,043	10,001.25	17,685
West coast of South America to east coast of Canada:							
British.....	3	18,044	15,587	28,085	16,138	19,483.75	37,730
Canadian intercoastal:							
British.....	2	5,015	4,042	6,873	4,124	5,052.50	7,014
West coast of Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	568
West coast of Central America to Europe:							
French.....	1	4,101	3,247	5,280	3,228	4,058.75	4,827
German.....	1	1,469	1,297	1,930	1,128	1,621.25	2,750
Total.....	2	5,570	4,544	7,210	4,356	5,680.00	7,577
Australasia to east coast of United States:							
United States.....	2	10,151	7,352	11,526	7,127	9,190.00	13,065
Australasia to east coast of Canada:							
British.....	2	9,666	7,689	9,632	7,753	9,611.25	4,716
Far East to east coast of United States:							
Japanese.....	2	11,044	8,705	14,007	8,498	10,881.25	5,616
Far East to West Indies:							
Norwegian.....	2	8,676	4,645	7,974	4,678	5,806.25	13,862
West coast of United States to east coast of Central America:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	2,563
West coast of United States to east coast of South America:							
Danish.....	1	6,054	5,058	8,271	5,057	6,322.50	12,100
West coast of United States to West Indies:							
Norwegian.....	1	5,035	4,395	7,078	4,411	3,625.20	.....
West coast of Canada to east coast of South Amer- ica:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	5,339
West coast of Canada to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,294
West coast of Central America to east coast of United States:							
German.....	1	3,533	2,542	4,201	2,554	2,543.76	.....

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Balboa to east coast of United States:							
United States.....	1	55	67	98	67	\$66.00	.....
Balboa to Cristobal:							
Panamanian.....	1	59	54	94	54	67.50	.....
Balboa to West Indies:							
United States.....	1	2,335	1,906	2,991	1,728	1,681.20	.....
Hawaii to Europe:							
Swedish.....	1	5,661	3,406	5,642	4,329	4,257.50	7,762
Far East to Europe:							
British.....	1	4,683	3,705	5,971	3,757	4,631.25	6,170
Grand total, August, 1930.....	221	1,087,392	818,416	1,352,631	826,075	1,017,860.60	1,469,062
Grand total, August, 1929.....	274	1,251,667	971,908	1,588,746	976,531	1,207,778.46	1,822,069
Grand total, August, 1928.....	255	1,172,387	896,159	1,470,265	902,499	1,114,163.80	1,672,828

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 8, 1930.

No. 753.

Colombia, Tumaco Road, lights extinguished. The following information was reported to the Cristobal Hydrographic office by the Panama Railroad S. S. *Buena-ventura*:

On September 1, 1930, El Morro Island light and buoy No. 3, Tumaco Road, Colombia, were not burning.

Approximate positions: El Morro Island, Lat. 01° 50' 50" N., Long. 78° 43' 50" W.; buoy No. 3, Lat. 01° 51' 45" N., Long. 78° 43' 54" W.

J. L. SCHLEY,
Acting Governor.

Traffic by Nationality for August, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of August, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with corresponding totals for August, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$5,710.00	5,200
British.....	57	314,606	225,620	375,790	229,158	266,933.96	191,634
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	3,206
Colombian.....	3	450	441	673	441	532.45	696
Danish.....	4	19,310	14,531	23,602	14,681	16,919.84	11,213
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	6	24,803	16,661	27,792	16,880	20,826.25	13,092
French.....	5	31,663	22,668	37,644	23,365	21,988.50	8,577
German.....	17	59,206	43,087	71,800	43,251	52,251.05	34,386
Italian.....	3	22,870	15,746	30,819	17,306	19,682.50	5,944
Japanese.....	5	27,965	22,714	35,576	23,041	28,140.35	26,157
Norwegian.....	20	105,837	73,103	122,951	73,294	78,952.48	68,046
Panamanian.....	3	6,810	5,807	9,244	5,806	4,976.70	198
Swedish.....	6	30,622	20,104	52,324	24,781	21,969.33	13,891
United States.....	111	593,376	456,053	739,834	455,576	507,284.46	297,167
Total, August, 1930.....	244	1,258,181	933,348	1,558,747	944,570	1,062,369.82	679,407
Total, August, 1929.....	267	1,307,072	971,968	1,607,157	975,948	1,119,659.40	858,661
Total, August, 1928.....	271	1,264,859	960,408	1,586,980	967,722	1,084,905.51	752,508

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,133	6,957	10,095	6,776	\$8,696.25	13,759
British.....	50	267,796	203,257	335,178	206,708	253,967.65	340,853
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,839
Colombian.....	3	450	441	673	441	534.85	361
Danish.....	3	17,020	14,469	21,821	14,498	18,086.25	29,672
Danzig.....	2	14,294	10,753	17,891	10,103	13,441.25	24,330
Dutch.....	7	29,993	18,787	32,282	19,300	23,483.75	35,816
French.....	4	21,466	15,085	26,388	15,379	18,856.25	29,622
German.....	17	58,953	41,910	70,028	41,748	50,533.05	71,451
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	8,902
Japanese.....	8	40,158	34,016	51,425	33,950	42,187.50	48,577
Norwegian.....	14	67,582	46,805	77,497	47,028	56,637.70	91,993
Panamanian.....	1	59	54	94	54	67.50	.....
Swedish.....	5	23,870	15,311	35,217	19,253	19,138.65	46,880
United States.....	103	526,449	402,233	658,608	401,733	501,807.35	725,007
Total, August, 1930.....	221	1,087,392	818,416	1,352,631	826,075	1,017,860.60	1,469,062
Total, August, 1929.....	274	1,251,667	971,908	1,588,746	976,531	1,207,778.46	1,822,069
Total, August, 1928.....	255	1,172,387	896,159	1,470,265	902,489	1,114,163.80	1,672,828

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	13,109	11,525	17,233	10,764	\$14,406.25	18,959
British.....	107	582,402	428,877	710,968	435,866	520,901.61	532,487
Chilean.....	3	14,049	10,332	21,930	11,928	12,015.00	5,045
Colombian.....	6	900	882	1,346	882	1,067.30	1,057
Danish.....	7	36,330	29,000	45,423	29,179	35,006.09	40,885
Danzig.....	3	20,604	16,099	26,831	15,153	17,984.45	24,330
Dutch.....	13	54,796	35,448	60,074	36,180	44,310.00	48,908
French.....	9	53,129	37,753	64,032	38,744	43,844.75	38,199
German.....	34	118,159	84,997	141,828	84,999	102,784.10	105,837
Italian.....	4	29,367	20,651	38,943	22,434	25,813.75	14,846
Japanese.....	13	68,123	56,730	87,001	56,991	70,327.85	74,734
Norwegian.....	34	173,419	119,908	200,448	120,322	135,620.18	160,039
Panamanian.....	4	6,869	5,861	9,338	5,860	5,044.20	198
Swedish.....	11	54,492	35,415	87,541	44,031	41,108.08	60,771
United States.....	214	1,119,825	858,286	1,398,442	857,309	1,009,096.81	1,022,174
Total, August, 1930.....	465	2,345,573	1,751,764	2,911,378	1,770,645	2,080,230.42	2,148,469
Total, August, 1929.....	541	2,558,739	1,943,876	3,195,903	1,952,479	2,327,437.86	2,680,730
Total, August, 1928.....	526	2,437,246	1,856,567	3,057,243	1,870,211	2,199,069.31	2,425,336

Tanker Traffic Through the Panama Canal in August, 1930.

During the month of August, 1930, 95 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 526,104, on which tolls of \$461,949.41 were paid. Cargo amounted to 490,437 tons, which included 456,110 tons of mineral oil and 14,613 tons of creosote, and 19,714 tons of molasses. In point of net tonnage, tanker traffic decreased 9.7 per cent as compared with the same traffic for the corresponding month-a year ago, while cargo tonnage decreased 18.4 per cent.

Tank vessels comprised 20.4 per cent of the total commercial transits through the Canal during the month; made up 22.4 per cent of the total Panama Canal net tonnage; were the source of 22.2 per cent of the tolls collected; and carried 22.8 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of August, 1930, segregated by

direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for August, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
Belgian.....	1	4,976	\$5,710.00	¹ 5,200
British.....	9	44,944	36,968.16	² 21,538
Danzig.....	1	6,310	4,543.20	
French.....	1	6,907	5,019.75	
German.....	1	4,340	3,124.80	
Norwegian.....	5	23,847	17,079.84	
Panamanian.....	1	6,650	4,788.00	
United States.....	30	176,016	128,725.36	14,677
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, July, 1930.....	51	281,690	202,949.10	
Total, June, 1930.....	65	345,896	256,991.09	27,972
Total, August, 1929.....	50	259,668	194,731.47	34,356
<i>Pacific to Atlantic.</i>				
British.....	13	66,038	70,902.65	³ 125,162
Danish.....	1	6,054	6,322.50	12,100
Danzig.....	2	14,294	13,441.25	24,330
Dutch.....	1	4,317	4,365.00	7,416
French.....	1	5,385	5,743.75	9,210
German.....	1	4,435	4,742.50	8,447
Norwegian.....	3	16,862	16,123.95	21,967
United States.....	24	134,729	134,348.70	⁴ 240,390
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, July, 1930.....	69	375,067	385,446.09	688,237
Total, June, 1930.....	44	245,517	251,649.15	432,961
Total, August, 1929.....	59	322,779	329,195.06	566,907

¹ Creosote.² Includes 9,413 tons creosote.³ Includes 12,652 tons of molasses.⁴ Includes 7,062 tons of molasses.

The following tabulation shows the tanker traffic through the Canal during August, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	153,398	\$110,512.71	
United States to South America.....	1	4,326	3,114.72	
United States to Far East.....	1	7,388	6,473.75	11,750
Canada to South America.....	2	12,766	9,191.52	
Central America to South America.....	1	3,892	4,203.75	7,619
West Indies to South America.....	1	3,326	3,590.00	4,506
West Indies to Balboa.....	1	2,235	2,382.50	2,927
Europe to United States.....	12	71,517	53,460.64	¹ 9,413
Europe to Canada.....	1	4,976	5,710.00	¹ 5,200
Europe to South America.....	2	10,166	7,319.52	

¹ Creosote.

PACIFIC TO ATLANTIC.

Trade routes.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	22	128,108	\$128,826.25	233,328
United States to South America.....	1	6,054	6,322.50	12,100
United States to Hawaii.....	1	5,035	3,625.20	
United States to Australasia.....	11	55,254	58,936.40	99,863
South America to United States.....	4	20,145	19,713.75	34,957
South America to Canada.....	3	18,044	19,483.75	37,730
South America to Europe.....	1	6,127	6,555.00	11,330
Balboa to West Indies.....	1	2,335	1,681.20	
Hawaii to United States.....	1	4,286	3,841.25	² 7,062
Philippine Islands to United States.....	1	6,726	6,975.00	² 12,652

² Molasses.

Of the tanker traffic passing through the Canal in August, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for August, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
August, 1930.....	33	193,904	\$139,567.59	.....
July, 1930.....	45	248,984	179,400.78	.....
June, 1930.....	56	300,724	219,484.66	9,782
August, 1929.....	36	185,410	134,683.91	7,400
<i>From Los Angeles.</i>				
August, 1930.....	33	183,370	185,721.60	325,811
July, 1930.....	56	302,142	307,081.25	545,893
June, 1930.....	33	189,882	191,944.40	330,780
August, 1929.....	43	236,932	237,282.96	401,565

United States Intercoastal Traffic by Commodities for August, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for August, 1930, and the totals for August, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic. to Pacific.	Pacific to Atlantic.	Totals.
Aeroplanes.....	.....	37	37
Agricultural implements.....	209	149	358
Alfalfa.....	.....	1,345	1,345
Alfalfa meal.....	.....	661	661
Ammonia.....	43	.....	43
Asbestos.....	27	.....	27
Asphalt.....	139	46	185
Automobiles.....	3,410	183	3,593
Automobile accessories.....	774	140	914
Bamboo.....	.....	23	23
Bark:			
Cascara.....	.....	19	19
Other.....	28	507	535
Beans.....	189	1,555	1,744
Borax.....	.....	269	269
Bricks.....	95	.....	95
Burlap.....	140	93	233
Calcium carbide.....	40	.....	40
Camphor.....	.....	11	11
Canned:			
Fish.....	271	9,373	9,644
Fruit.....	34	21,281	21,315
Meat.....	.....	800	800
Milk.....	.....	55	55
Soup.....	2,359	.....	2,359
Vegetables.....	446	3,410	3,856
Miscellaneous.....	2,519	5,789	8,308
Carbon black.....	32	.....	32
Celite filtercel.....	.....	954	954
Cement.....	377	27	404
Charcoal.....	161	120	281
Chemicals.....	783	112	895
China and fire clay.....	118	206	324
Coal.....	1,500	.....	1,500
Cocoa.....	198	66	264
Coconuts.....	19	311	330
Coffee.....	424	51	475
Coke.....	820	.....	820
Cold storage:			
Beef.....	17	9	26
Butter.....	.....	250	250
Cheese.....	100	161	261
Other.....	602	402	1,004

	Atlantic. to Pacific.	Pacific to Atlantic.	Totals.
Confectionery.....	447		447
Cork.....	518		518
Cotton.....	749	762	1,511
Cottonseed meal.....		479	479
Cyanide.....	50		50
Drugs.....	983	43	1,026
Dyes.....	11		11
Dyewoods.....	15		15
Earthenware.....	106	121	227
Eggs, dried.....		126	126
Explosives.....	45	9	54
Fertilizer.....	200		200
Flour.....	324	5,132	5,456
Fruit:			
Dried.....	34	3,540	3,574
Fresh.....	7	1,190	1,197
Fuller's earth.....	500	54	554
Furniture.....	190	56	246
General.....	44,654	16,500	61,154
Glass and glassware.....	1,228	289	1,517
Glue.....	62	15	77
Granite.....	170		170
Gum.....		16	16
Hair.....	63	128	191
Hardwoods.....	521	100	621
Hay.....		1,717	1,717
Hemp.....		1,633	1,633
Honey.....		131	131
Hops.....		46	46
Infusorial earth.....		30	30
Kapok.....		111	111
Lard substitute.....	2,038	13	2,051
Leather.....	8		8
Lime.....	229		229
Linoleum.....	443	50	493
Liquors.....	225		225
Lumber.....	2,460	120,754	123,214
Maize.....	13		13
Malt.....	104		104
Manufactured goods:			
Iron and steel.....	76,724	1,284	78,008
Machinery.....	2,527	238	2,765
Railroad material.....	42		42
Tinplate.....	9,569		9,569
Textiles.....	2,663	284	2,947
Miscellaneous.....	4,141	341	4,482
Marble.....	88		88
Matches.....	143		143
Metals:			
Antimony.....		50	50
Copper.....		2,387	2,387
Iron.....	2,225	654	2,879
Lead.....	27	829	856
Scrap.....	575	835	1,410
Zinc.....		946	946
Other.....		27	27
Milk, powdered.....		753	753
Molasses.....	116		116
Musical instruments.....	12		12
Nuts.....		58	58
Oats.....	61		61
Oils:			
Coconut.....		800	800
Cottonseed.....	111		111
Crude.....	54		54
Gas oil, fuel oil.....	30	22,681	22,711
Gasoline, benzine, naphtha.....		232,178	232,178
Kerosene.....		9,071	9,071
Lubricating and greases.....	3,582	74	3,656
Olive.....	93		93
Vegetable.....		27	27
Other.....	270		270
Ores:			
Antimony.....		60	60
Copper.....		407	407
Magnesite.....		72	72
Manganese.....		100	100
Other.....	30		30
Paint.....	334	48	382
Paper.....	6,898	6,891	13,789
Paper pulp.....	52	8,612	8,664
Paper roofing.....		32	32
Peanuts.....	215	342	557
Peas.....		43	43
Phosphates.....	2,338		2,338

	Atlantic. to Pacific.	Pacific to Atlantic.	Totals.
Porcelain.....	180	1,481	1,661
Quicksilver.....		4	4
Rags.....	38	727	765
Rice.....	83	70	153
Rope.....	30	76	106
Rosin.....	1,802		1,802
Rubber, manufactured.....	586	60	646
Salt.....	171		171
Seeds:			
Hemp.....		166	166
Other.....		178	178
Shells.....	1,003		1,003
Silk.....		704	704
Skins and hides.....		1,256	1,256
Slag.....	1,201		1,201
Slate.....	955		955
Soap.....	2,095	446	2,541
Soda.....	533		533
Soda ash.....	1,259		1,259
Soda, bicarbonate.....	128		128
Soda, caustic.....	110		110
Sugar.....	30	11,528	11,558
Sulphur.....	17,616		17,616
Syrup.....	233	65	298
Talc.....		78	78
Tallow.....		207	207
Tar.....	16	25	41
Tobacco.....	986	47	943
Toys.....	32	119	151
Turpentine.....	95		95
Vegetables.....	14	412	426
Waste.....		65	65
Wax.....	15	129	144
Wheat.....		143	143
Wine.....		113	113
Wool.....	10	2,412	2,422
Total, August, 1930.....	214,322	512,105	726,427
Total, August, 1929.....	291,381	690,983	982,364
Total, August, 1928.....	243,405	595,539	838,944

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 8, 1930.

No. 755.

Panama, Panama Bay, Knocker Rock gas buoy, characteristic of light changed. The following is quoted from "Notice to Mariners," Washington, D. C., August 31, 1930:

The light on Knocker Rock gas buoy has been changed from flashing white to flashing red every 6 seconds, flash 1 second, eclipse 5 seconds. Approximate position, Lat. 8° 57' 00" N., Long. 79° 31' 20" W.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending September 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
City of Panama.....	Panama Mail S. S. Co.....	August 23.....	August 31.....	345	
Champerico.....	Pacific Steam Navigation Co.....	August 23.....	August 23.....		1
Toyama Maru.....	Nippon Yusen Kaisha.....	August 24.....	August 25.....	151	
Frost.....	West India Oil Co.....	August 24.....	August 28.....	300	
Benjamin Franklin.....	Fred Olsen & Co.....	August 24.....	August 25.....	824	
Santa Teresa.....	Grace Line.....	August 26.....	August 26.....	17	179
Ecuador.....	Panama Mail S. S. Co.....	August 26.....	August 27.....	221	342
El Salvador.....	Panama Mail S. S. Co.....	August 26.....	August 27.....	67	
Arwyco.....	General Navigation Co.....	August 27.....	August 28.....		75
Somme.....	U. S. Government.....	August 27.....	August 28.....	34	10
Kenowis.....	U. S. Government.....	August 27.....	August 29.....	1	35
Tong King.....	East Asiatic Co.....	August 27.....	August 28.....	62	
Cerigo.....	Hamburg-American Line.....	August 27.....	August 27.....	200	
Malmanger.....	Westfal, Larsen & Co.....	August 27.....	August 30.....	9,202	
Salasas.....	S. A. Nanset.....	August 28.....	August 31.....	6,839	
La Perla.....	United Fruit Co.....	August 28.....	August 29.....	116	70
Santa Clara.....	Grace Line.....	September 3.....	September 3.....	95	8
Boskoop.....	Royal Netherlands S. S. Co.....	September 3.....	September 3.....	87	
California.....	Panama-Pacific S. S. Line.....	September 5.....	September 5.....		179

New Light Ship Transits Canal.

The lightship *Fire Island* arrived at Balboa from Portland, Oreg., on September 2, and after taking on fuel oil and supplies, transited the Canal on September 4. She is bound for New York via Charleston, S. C., and is due to arrive at her destination about September 18.

The *Fire Island*, which was built by the Albina Marine Iron Works at Portland, Oreg., and launched in December, 1929, is one of three new lightships in the Lighthouse Service of the Department of Commerce and is to replace the present ship at Fire Island, off long Island, N. Y. The new lightship is equipped with a number of improvements and new features not seen on old lightships. The *Fire Island* is powered with Diesel-electric engines and is to be equipped with a radio beacon before being put into service. The service of the old lightship, equipped with only a fixed light, was diminished during periods of poor visibility. The new ship, equipped with the radio beacon, will enable vessels to ascertain their position regardless of the visibility. The *Fire Island* has a length of 123 feet, beam of 30 feet, and draft of 11 $\frac{3}{4}$ feet.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending August 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Cartago.....	United Fruit Co.....		August 24.....		4
Alaska.....	French Line.....		August 24.....		2
Pastores.....	United Fruit Co.....	August 24.....	August 24.....	23	307
Benjamin Franklin.....	Fred Olsen & Co.....	August 24.....	August 24.....	264	(²)
Galicia.....	Hamburg-American Line.....	August 24.....	August 24.....	(¹)	239
Castilla.....	United Fruit Co.....	August 24.....	August 25.....	1	134
Wisconsin.....	French Line.....	August 24.....	August 25.....	263	104
Donau.....	North German Lloyd.....	August 24.....	August 25.....	181	187
Tayama Maru.....	Nippon Yusen Kaisha Line.....	August 25.....	August 25.....	133	(²)
Tai Yin.....	Barber Line.....	August 25.....	August 25.....	79	133
Axel Johnson.....	Johnson Line.....	August 25.....	August 25.....	123	(²)
Wido.....	North German Lloyd.....	August 25.....	August 26.....	180	97
Haarlem.....	Royal Netherlands S. S. Co.....	August 25.....	August 26.....	156	107
Santa Teresa.....	Grace Line.....	August 25.....	August 26.....	36	529
El Salvador.....	Panama Mail S. S. Co.....	August 25.....	August 26.....	240	519
Cauca.....	United Fruit Co.....	August 25.....	August 27.....	248	242
Virgilio.....	Italian S. S. Line.....	August 25.....	August 27.....	164	(²)
Ulua.....	United Fruit Co.....	August 25.....	August 27.....	324	4
Kyphissia.....	Hamburg-American Line.....	August 26.....	August 26.....	220	221
Wyoming.....	French S. S. Line.....	August 26.....	August 26.....	38	8
Vermar.....	Calmar S. S. Corp.....	August 26.....	August 27.....	774	(²)
Gruenwald.....	Hamburg-American Line.....	August 26.....	August 27.....	96	3
Parthenia.....	Donaldson S. S. Line.....	August 26.....	August 27.....	(¹)	370
Marstene.....	Aluminium S. S. Line.....	August 26.....	August 27.....	470	(²)
Pacific Enterprise.....	Furness Line.....	August 26.....	August 29.....	(¹)	469
Cristobal.....	Panama R. R. S. S. Line.....	August 27.....	August 27.....	3,257	
Pearl Marie.....	R. Feuillebois.....	August 27.....	August 27.....	(¹)	7
Ecuador.....	Panama Mail S. S. Co.....	August 27.....	August 28.....	609	202
Sixaola.....	United Fruit Co.....	August 27.....	August 28.....	340	87
Tela.....	United Fruit Co.....	August 27.....	August 28.....	646	207
Margaret Johnson.....	Johnson Line.....	August 27.....	August 28.....	(¹)	117
Mercian.....	Leyland S. S. Line.....	August 27.....	August 28.....	460	(²)
Cerigo.....	North German Lloyd.....	August 27.....	August 28.....	381	
Mary V.....	Lin Ming.....	August 28.....	August 28.....	(¹)	16
Teno.....	Chilean S. S. Line.....	August 28.....	August 29.....	(¹)	235
Bolivar.....	United Fruit Co.....	August 28.....	August 29.....	120	672
Manizales.....	North German Lloyd.....	August 28.....	August 30.....	767	301
Orduna.....	Pacific Steam Navigation Co.....	August 29.....	August 29.....	6	(²)
La Perla.....	United Fruit Co.....	August 29.....	August 30.....	634	(²)
Castilla.....	United Fruit Co.....	August 29.....	August 30.....	38	54
Atlantida.....	Standard Fruit & S. S. Co.....	August 29.....	August 30.....	147	359
Acajutla.....	Pacific Steam Navigation Co.....	August 29.....	August 30.....	363	
Santa Maria.....	Grace Line.....	August 30.....	August 30.....	117	
Parismina.....	United Fruit Co.....	August 30.....	August 30.....	56	
Peter Kerr.....	States S. S. Line.....	August 30.....	August 30.....	74	
Dora K.....	R. Feuillebois.....	August 30.....	August 30.....	(¹)	5

¹ No cargo discharged.

² No cargo laded.

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Cargo Through the Canal During August, 1930.

On pages 92 and 93 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in August, 1930. This cargo, segregated according to direction, as compared with August, 1929, and the differences are shown in the following tabulation:

	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	858,661	679,407	—179,254
Pacific to Atlantic.....	1,822,069	1,469,062	—353,007
Total.....	2,680,730	2,148,469	—532,261

It will be noted from the above that the Atlantic to Pacific tonnage decreased 179,254 tons, or 20.9 per cent, as compared with August, 1929, and that from the Pacific to Atlantic decreased 353,007 tons, or 19.4 per cent, making a total decrease of cargo tonnage in both directions of 532,261 tons, or 19.9 per cent. The heavy decrease from the Atlantic was accounted for by a general curtailment in shipments and a large decrease in cargo tonnage of several important commodities as indicated under "Principal commodities." Shipments of manufactured iron and steel declined 84,226 tons; automobiles and accessories, 21,183 tons; mineral oils, 10,617 tons; and cement, 23,031 tons. There was an increase of 32,553 tons of sulphur from the Atlantic. The decrease from the Pacific was due to losses in tonnage of mineral oils, 93,958 tons; lumber, 177,648 tons; nitrates, 97,366 tons; and barley, 17,000 tons. Wheat, molasses, rice, and cold storage cargo show increases of 47,212 tons, 13,860 tons, 13,282 tons, and 11,171 tons, respectively.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty and five-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 26.7 per cent in Europe. Tonnage from the United States decreased 125,561 tons, or 23.4 per cent, as compared with August, 1929, and the proportion to the total in August, 1930, was lower. The amount originating in Europe decreased 68,870 tons, or 27.5 per cent, and the percentage of the whole was lower in August of this year.

Destination.—Forty-two and four-tenths per cent of the Pacific-bound tonnage was destined to the United States; 13.9 per cent to South America; 18.6 per cent to Asia; and 15.9 per cent to Australasia. Cargo tonnage to all these areas declined as compared with August, 1929, in actual tonnage as follows: To the United States, 90,507 tons, or 23.9 per cent; to South America, 26,374 tons, or 21.9 per cent; to Australasia, 24,104 tons, or 18.3 per cent; and to Asia, 45,484 tons, or 26.4 per cent. In point of relation of cargo destined to the aforemen-

tioned areas to the total tonnage in this direction, that to the United States, South America, and Asia decreased, while that to Australasia showed a gain.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.6 per cent came from the United States; 25.9 per cent from South America; 10.3 per cent from Canada; 4.5 per cent from Asia; and 4.4 per cent from Australasia. As compared with the corresponding month a year ago, tonnage from the United States decreased 297,471 tons, or 27.8 per cent, and the percentage of the total was lower in August, 1930. Cargo tonnage from South America decreased 127,713 tons, or 25.1 per cent, and also showed a reduced percentage in its relation to the total cargo. Tonnage from Canada increased 18,272 tons, or 13.8 per cent, with an increase in the percentage of the total. Asia showed a cargo increase of 30,427 tons, or 85.1 per cent, while Australasia showed an increase of 11,576 tons, or 21.6 per cent. Each of these areas showed an increase in the percentage to the total cargo. The decrease in cargo tonnage from the United States was principally due to lumber and mineral oils. The greater part of the decrease from South America was caused by lessened nitrate shipments. The gain from Canada was due to wheat shipments and that from Australasia to larger shipments of meat in cold storage and wool. The increase from Asia was due to large shipments of molasses and rice.

Destination.—Segregated according to destination, 57.3 per cent of the cargo in this direction went to the United States, and 35.6 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage and showed a decrease in actual tonnage of 243,644 tons, or 22.4 per cent. That to Europe decreased 83,219 tons, or 13.7 per cent, while its relation to the total cargo was greater.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 85.0 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 15.0 per cent consists, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for August, 1929, or August, 1930, are listed in the following tabulation, showing differences:

Commodity.	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	10,830	4,254	-6,576
Asphalt.....	18,184	18,634	+450
Automobiles.....	23,387	8,953	-14,434
Automobile accessories.....	10,150	3,401	-6,749
Cement.....	48,220	25,189	-23,031
Coal and coke.....	14,205	12,131	-2,074
Cotton.....	8,176	10,991	+2,815
Cresosote.....	3,047	14,624	+11,577
Manufactured goods:			
Iron and steel.....	213,031	128,805	-84,226
Machinery.....	15,949	12,742	-3,207
Railroad material.....	20,425	5,441	-14,984
Textiles.....	13,356	9,170	-4,186
Tinplate.....	20,156	20,025	-131
Miscellaneous.....	13,699	6,580	-7,119
Metal, scrap (principally iron).....	12,735	10,732	-2,003
Oils, mineral.....	72,393	61,731	-10,617
Paper.....	29,571	22,693	-6,878
Phosphates.....	31,344	36,437	+5,093
Sugar.....	6,591	11,367	+4,776
Sulphur.....	1,567	34,120	+32,553

The above 20 commodity groups comprise 67.4 per cent of the cargo moving from the Atlantic to the Pacific during August, 1930. Fifteen of the items show decreases and 5 increases as compared with August, 1929. The largest decline was in manufactured iron and steel.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.4 per cent of all cargo moving from the Pacific to Atlantic during the month of August, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	August, 1929.	August, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Asphalt.....	11,104	1,520	-9,584
Barley.....	40,690	23,690	-17,000
Canned goods (fish, fruit, vegetables, etc.).....	55,836	53,803	-2,033
Cold storage (food products) *.....	18,396	29,567	+11,171
Copra.....	20,947	4,000	-16,947
Fruit, dried.....	13,631	10,152	-3,479
Fruit, fresh.....	11,538	6,981	-4,557
Lumber.....	371,798	194,150	-177,648
Metals, various.....	67,250	52,656	-14,594
Molasses.....	7,000	20,860	+13,860
Nitrates.....	164,283	66,917	-97,366
Oils, mineral.....	554,837	460,879	-93,958
Ores (principally iron).....	175,769	173,096	-2,673
Pulp.....	15,725	9,201	-6,524
Rice.....	3,265	16,547	+13,282
Sugar.....	63,538	63,513	-25
Wheat.....	94,832	142,044	+47,212

* Fresh fruit not included.

The above 17 commodity groups comprise 90.5 per cent of the cargo moving from the Pacific to the Atlantic during August, 1930. Thirteen of the items show decreases and 4 increases. Food products in cold storage, molasses, rice, and wheat show increases. Lumber, nitrates, and mineral oils were the commodities which decreased most heavily.

(Continued on page 92.)

New Vessels for United Fruit Company.

According to an announcement of the United States Shipping Board, loans to the United Mail Steamship Company aggregating \$15,412,500 are to be used in aid of building 6 passenger cargo steamships for the Central-American services of the United Fruit Company.

The vessels to be built under these loans will be 447 feet long, 60 feet beam, and 24 feet draft, with a deadweight tonnage of 4,000 tons each. They will be equipped with turbo-electric drive and an average speed of 16½ knots is expected. Three of the vessels will be operated between San Francisco and Cristobal, stopping at Puerto Armuelles, Panama, and 3 between New York and Port Limon, Costa Rica.

* Following the development of new plantations on the Pacific side of Panama, in the region near Puerto Armuelles, the United Fruit Company discontinued its service from Port Limon to San Francisco via the Canal, displacing it by the service from Cristobal to California, via Balboa, Puerto Armuelles, and San Jose de Guatemala. Three of the new vessels will be used in this service, which now employs the steamships *La Perla*, *San Jose*, *San Mateo*, *Esparta*, *Saramacca*, and *Suriname*.

It is stated that the 6 new ships are to be completed and in operation within 3 years.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 13, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
San Francisco	6	2 30	7	6 05	German	Hamburg-American Line	432.3	60.0	23.0	Hamburg, Germany	Vancouver, B. C.	General.	4,795	8,454	6,344
Santa Teda	6	6 05	7	6 00	American	N. O. & S. A. S. S. Line.	298.6	40.0	16.3	New Orleans, La.	Talcahuano, Chile.	General.	1,179	2,532	1,803
Baron Tweed-															
month.	7	2 25	7	6 20	British	Hogarth Shipping Co.	340.0	48.0	14.6	Charleston, S. C.	Guanco Island, Peru	Ballast.	5,000	3,940	2,793
Cape York	7	4 00	7	7 50	British	Lyle Shipping Co.	409.0	54.0	20.6	Antwerp, Belgium	San Francisco, Cal.	Silver sand.	6,927	4,902	3,802
Meton	7	4 20	7	7 50	American	Tidewater S. S. Co.	425.6	57.0	20.0	New York, N. Y.	San Francisco, Cal.	Ballast.	7,484	5,212	4,062
Seminole	7	9 15	7	9 30	American	Roosevelt S. S. Co.	402.0	54.0	27.4	Philadelphia, Pa.	Adelaide, Australia	General.	2,128	6,372	5,002
Durazo	7	19 50	7	9 40	German	Hamburg-American Line	226.0	34.0	13.9	Cristobal, C. Z.	Guayaquil, Ecuador	General.	139	1,633	1,041
Arizono	7	16 58	7	16 31	French	French Line	425.0	55.0	18.6	Havre, France	Vancouver, B. C.	Coffee, etc.	431	7,351	5,189
Dryden	7	17 59	7	17 59	American	Tampa Intercoastal Co.	434.0	57.6	24.0	New Orleans, La.	Iloilo, P. I.	General.	5,979	7,983	5,883
Guayaquil	6	10 55	7	12 37	American	Panama R. R. S. S. Line	251.0	43.6	19.3	New York, N. Y.	Guayaquil, Ecuador	General.	1,896	2,874	1,944
Ruhr	6	18 10	7	13 50	German	Hamburg-American Line	454.0	58.3	20.6	Hamburg, Germany	San Antonio, Chile.	General, cement.	4,648	8,086	5,918
K. R. Kings-															
bury	7	16 30	7	16 50	American	Standard Oil Co.	440.0	58.0	22.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	9,033	5,933	5,933
Kim	7	15 15	8	11 22	Norwegian	Standard Shipping Co.	396.2	55.0	14.0	Newcastle, Eng.	Talra, Peru	Ballast.	6,363	4,386	3,366
S. C. T. Dodd	7	16 45	8	6 05	American	Standard Oil Co.	425.0	57.2	18.6	Philadelphia, Pa.	San Francisco, Cal.	Ballast.	7,481	4,975	3,802
Tai Ping Yang	8	1 45	8	7 20	Panamanian	Barber S. S. Line.	461.0	60.0	21.6	New York, N. Y.	Hongkong, China.	General.	3,944	9,866	6,955
Atlantic Sun	8	2 05	8	8 35	American	Sun Oil Co.	429.3	59.2	19.0	Tampa, Fla.	Los Angeles, Calif.	Ballast.	7,568	5,253	3,944
Montgomery															
City	8	8 40	8	9 41	American	Islemania S. S. Lines	424.2	56.2	25.10	New York, N. Y.	Sourabaya, Java.	General.	7,853	7,611	5,450
Monique	8	12 50	8	13 05	French	Desmarais & Co.	425.0	56.0	20.0	Bayre, France	Los Angeles, Calif.	Ballast.	5,290	7,106	5,068
Kina Maru	8	16 45	8	18 50	Japanese	Otsuka Shosha Kaisha	446.0	60.0	24.0	New York, N. Y.	Shanghai, China.	Gen., tinplate.	8,932	6,272	4,902
Esley City	9	4 10	9	6 35	American	Islemania S. S. Lines	396.5	55.0	27.0	New York, N. Y.	Vancouver, B. C.	General.	8,220	7,330	5,239
Oneda	9	6 05	9	7 10	American	Ford Motor Co.	251.0	43.6	18.6	Chester, Pa.	Long Beach, Calif.	Antio. parts	2,200	2,056	1,621
Malat	9	00 10	9	9 30	British	New Zealand Gov't.	219.0	35.0	12.6	Newcastle, Eng.	Wellington, N. Z.	Ballast.	1,185	1,185	400
Santa Rita	9	1 30	9	12 00	American	Grace Line	379.0	53.2	20.10	New York, N. Y.	Talcahuano, Chile.	General.	1,824	6,235	4,069
Calabria	8	13 20	9	13 00	American	Panama Mail S. S. Co.	370.0	48.7	23.7	New York, N. Y.	San Francisco, Cal.	General, coffee.	2,125	6,015	4,281
West Cape	9	12 55	9	13 45	American	McCormick S. S. Co.	409.0	54.0	22.0	Philadelphia, Pa.	Tacoma, Wash.	General.	5,983	6,566	4,960
Sun	10	3 30	10	6 15	American	Sun Oil Co.	489.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,620	4,476	3,476
J. L. Lucken-															
bach	10	3 20	10	7 10	American	Luckenbach Line.	448.9	60.0	20.0	Boston, Mass.	Seattle, Wash.	General.	4,000	9,294	6,861
Canadian															
Highlander	10	7 25	10	7 55	British	Can. Nat. Steamships	400.0	52.0	20.0	Montreal, Canada	Bluff, N. Z.	General.	4,000	6,192	4,402
Laurel	10	1 50	10	10 10	Swedish	Vacuum Oil Co.	482.3	65.0	19.10	Glasgow, Scotland.	San Francisco, Cal.	Ballast.	6,279	6,604	4,655
Pomarr	10	12 40	10	12 00	American	Calmar Line	410.0	54.2	23.2	Rosario, Argentina.	Seattle, Wash.	Steel, general.	4,800	6,381	4,989
West Nisus	10	14 15	10	12 55	American	McCormick S. S. Co.	410.0	53.3	19.0	Boston, Mass.	Vancouver, B. C.	Cocoa, coffee.	3,860	7,079	5,038
Iowan	10	14 15	10	20 53	American	Amer.-Hawaiian Line.	407.7	53.7	19.0	Boston, Mass.	Seattle, Wash.	General.	3,860	7,079	5,038
Port Brisbane	10	11 30	10	15 05	British	Comth & Dom. Line.	481.0	62.0	25.0	New York, N. Y.	Dunedin, N. Z.	General.	1,511	10,708	7,354

¹ Lighthouse tender.

² Motor ship.

³ Tanker.

	10 16.45	10 19.45	11 9.02	11 10.37	British	Andrew Wear & Co.	407.0	53.6	20.0	Tampico, Mexico.	Brisbane, Australia	Asphalt	5,251	6,003	4,521
Lornaston	10 00.25	11 6.20	11 13.40	11 13.40	American	Arrow Line	409.7	54.2	22.0	Savannah, Ga.	Seattle, Wash.	General	6,225	6,603	4,915
Charles	11 2.50	11 7.10	11 14.32	11 14.32	British	Imperial Oil Co.	470.0	63.2	23.0	Halifax, N. S.	Talara, Peru	Ballast	9,191	9,191	5,278
Christenson	11 8.50	11 9.00	11 15.55	11 15.55	Japanese	Nippon Yusen Kaisha	390.0	57.0	27.0	Baltimore, Md.	Kobe, Japan	Lubricating oil	8,060	8,139	5,400
Ontariolite 1, 2	11 8.50	11 9.00	11 15.55	11 15.55	American	U. S. Tank Ship Corp.	440.0	54.2	27.0	Mobile, Ala.	Honolulu, T. H.	Ballast	6,205	6,205	4,286
Anka Maru 2	11 6.15	11 12.30	11 19.18	11 19.18	American	States S. S. Co.	410.0	54.4	18.8	Philadelphia, Pa.	Seattle, Wash.	General	3,808	6,484	4,675
Casta 1	11 6.15	11 12.30	11 19.18	11 19.18	American	U. S. Navy	243.0	36.0	18.10	Cristobal, C. Z.	Balboa, C. Z.	Ballast	4,050	18,206	13,500
San Rafael	11 6.15	11 12.30	11 19.18	11 19.18	British	N. Z. Shipping Co.	531.0	70.0	27.6	London, England	Wellington, N. Z.	General	1,170	10,086	7,226
Ningara 1	11 19.10	12 6.10	12 12.30	12 12.30	British	Furness, Withy & Co.	408.3	60.8	19.6	Glasgow, Scotland	Portland, Ore.	Gen., bananas	6,425	4,276	
Radifata 2	10 11.25	12 6.05	12 13.38	12 14.55	British	Caenarian Oil Co.	450.3	55.3	21.9	Alglowmouth, Eng.	Los Angeles, Calif.	Ballast	7,639	5,135	
President 2	11 22.25	12 7.15	12 14.27	12 16.25	Norwegian	Standard Oil Co.	435.0	56.2	22.0	Philadelphia, Pa.	San Francisco, Cal.	Ballast	5,478	8,543	6,402
Ch. Th. Boe 1	12 4.00	12 7.10	12 14.58	12 16.25	American	Blue Star Line	389.8	57.0	25.0	Houston, Texas	Seattle, Wash.	General	4,359	7,139	4,492
R. J. Hanna 1	12 9.00	12 9.55	12 15.24	12 16.25	American	Lucienbach Line	436.0	53.0	22.1	Newcastle, England	Los Angeles, Calif.	Ballast	180	211	124
Julia Luckenbach	12 4.50	12 9.55	12 16.28	12 17.40	British	Blue Star Line	389.8	57.0	25.0	Houston, Texas	Seattle, Wash.	General	3,129	5,914	4,195
Gaestner 2	12 6.15	12 11.05	12 17.30	12 19.35	British	Pacific Steam Nav. Co.	420.0	54.2	22.11	Hull, England	Corral, Chile	General	7,027	6,291	4,530
Agua 2	11 15.12	12 10.10	12 17.30	12 19.35	Colombian	National Navigation Co.	416.0	51.0	9.6	Cristobal, C. Z.	Buenaventura, Col.	General	3,192	7,963	5,837
Cathia 1	12 16.32	12 19.50	13 9.08	13 10.12	American	Standard Transp. Co.	468.0	63.0	21.0	Boston, Mass.	Los Angeles, Calif.	Ballast	3,129	5,914	4,195
Dixie Arrow 1	11 20.45	13 6.15	13 13.15	13 14.25	American	Shell Oil Co.	464.6	60.2	17.6	Cuneco, D. W. I.	Los Angeles, Calif.	Ballast	3,129	5,914	4,195
Swiflight 1	12 18.30	13 6.07	13 14.07	13 15.25	British	Cun. Nat. Steamships	400.0	52.0	23.5	Montreal, Canada	Sydney, Australia	General	3,340	8,236	6,039
Canadian	12 21.52	13 7.30	13 15.09	13 15.55	British	Kerr Line	425.6	58.3	21.0	New York, N. Y.	Manila, P. I.	General	7,027	6,291	4,530
Silverbeech 1	13 3.40	13 7.40	13 15.21	13 17.45	Norwegian	Pen Line	331.4	53.8	23.4	Boea Grande, Fla.	Shanghai, China	Cotton, lumber	3,192	7,963	5,837
Fernmoor 1	12 10.30	13 8.52	13 15.44	13 23.55	Norwegian	Fred Olsen & Co.	435.9	56.0	18.9	Oelo, Norway	Vancouver, B. C.	General, bananas	3,898		
Laurita	12 19.35	13 9.10	13 16.15	13 17.30	German	North German Lloyd	495.5	63.8	22.6	Hamburg, Germany	Vancouver, B. C.	General	5,100	5,607	4,103
Svenson 2	13 8.35	13 9.40	13 16.16	13 17.46	American	Reafoed Line	379.9	53.1	22.0	Houston, Texas	Los Angeles, Calif.	General	6,598	5,134	3,962
Este	13 8.10	13 10.00	13 17.31	13 18.30	British	Zim S. S. Co.	371.0	51.4	23.8	Cardiff, England	Antofagasta, Chile	(⁹)	6,255	1,105	698
Delight	13 8.10	13 10.00	13 17.31	13 18.30	British	Zim S. S. Co.	371.0	51.4	23.8	Cardiff, England	Antofagasta, Chile	(⁹)	6,255	1,105	698
Zonave	12 14.10	13 11.03	13 18.11	13 19.20	German	Roland Line	216.5	22.9	13.9	Cristobal, C. Z.	Guayaquil Ecuador	General	213	3,638	2,308
Call	12 14.10	13 11.03	13 18.11	13 19.20	German	Roland Line	216.5	22.9	13.9	Cristobal, C. Z.	Guayaquil Ecuador	General	213	3,638	2,308
Sarumaca	12 12.20	13 13.53	13 19.48	13 21.50	American	United Fruit Co.	336.7	42.0	17.6	Cristobal, C. Z.	San Francisco, Cal.	General	213	3,638	2,308
Siota 2	13 12.30	13 17.50	13 24.00	13 26.00	American	U. S. Navy	149.3	36.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast	2,930	2,061	1,393

4 Survey ship. 5 Tug. 6 Patent fuel, coke, and nut coal.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Lailla	6 20 10	7 6 35	7 14 20	7 17 00	Norwegian	William Hansen	265 0	42 1	19 0	Santa Rosa, Peru.	Jacksonville, Fla.	Guano	2,930	2,061	1,393
Cal	7 5 30	7 6 42	7 14 10	7 14 10	German	Roland Line	216 5	32 9	13 2	Guayaquil, Ecuador	Cristobal, C. Z.	General	560	1,105	698
Columbo	7 3 30	7 7 14	7 15 00	8 11 40	Italian	Nav. Gen. Italiana	518 0	64 0	24 0	Valparaiso, Chile	Genoa, Italy	General	1,700	12,553	7,516
Buenaventura	7 6 00	7 8 35	7 16 15	8 15 20	American	Panama R. S. S. Line	251 0	43 0	16 0	Guayaquil, Ecuador	New York, N. Y.	General	1,072	2,873	1,776
Senota 7	7 11 40	7 13 40	7 18 40	8 15 20	American	W. L. Guxey & Co.	155 0	30 0		Baltimore, B. C.	Baltimore, Md.	(⁹)	6,200	4,928	3,480
Tyr 8	7 14 50	7 15 48	7 22 30	8 15 05	Norwegian	W. L. Guxey & Co.	357 0	51 3	24 0	Vancouver, B. C.	Cristobal, C. Z.	Lumber	6,200	4,928	3,480
Amerikaland 8	7 22 30	8 5 58	8 15 05	8 15 05	Swedish	Ore S. S. Corp.	561 0	72 2	34 0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,800	15,500	4,496
Minister	7 17 30	8 6 47	8 15 20	8 15 20	Norwegian	Anglo-Saxon Pot. Co.	416 2	58 0	28 0	Los Angeles, Calif.	Cuneco, D. W. I.	Gasoline	9,200	7,304	4,912
Wedel 8	8 1 35	8 8 13	8 16 15	8 16 15	British	Lucien Molasses Co.	475 0	63 3	28 0	Los Angeles, Calif.	London, England	Gasoline	12,000	9,589	3,464
Abdennepress 8	8 1 35	8 9 03	8 17 15	8 17 15	American	Lucienbach Line	434 3	57 7	22 0	Tacoma, Wash.	Mobile, Ala.	General	6,488	7,982	5,922
Jaob Luckenbach	8 11 45	8 12 19	8 18 50	8 18 50	American	Calmar S. S. Corp.	384 4	51 2	23 0	Aberdeen, Wash.	Baltimore, Md.	Lumber	5,001	6,327	4,433
Oakmar	8 11 45	8 12 19	8 18 50	8 18 50	American	Calmar S. S. Corp.	384 4	51 2	23 0	Aberdeen, Wash.	Baltimore, Md.	Lumber	5,001	6,327	4,433

⁷ Tug.
⁸ Motor ship.
⁹ Towing barge No. 15.

⁹ Towing barge No. 15.

⁷ Tug.

⁸ Motor ship.

¹ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rapot.	8	12	20	8	13	13	8	20	40	9	13	09		Valparaiso, Chile.	Hamburg, Germany	General.	8,257	6,583	4,626
Sir Karl	8	19	25	9	6	20	9	13	40	9	13	40		Los Angeles, Calif.	Lands End, Eng. ¹²	Gasoline.	10,437	8,085	5,502
Knutson & Co.	8	16	36	9	6	40	9	14	50	9	15	50		Los Angeles, Calif.	New York, N. Y.	Gasoline.	9,210	7,333	5,182
Honkua.	9	7	55	9	8	38	9	16	00	9	16	00		Portland, Oreg.	Boston, Mass.	Lumber, general.	9,282	8,507	6,020
Missourian ¹⁰	9	14	24	9	15	04	9	21	50	9	21	50		Portland, Oreg.	Boston, Mass.	General.	8,789	8,508	6,179
Karuna-Look-enhuk	9	15	04	9	21	50	9	21	50	9	21	50		Portland, Oreg.	Boston, Mass.	Nitrates.	6,350	5,125	3,741
Romulus	9	18	00	9	19	16	9	21	50	9	21	50		Portland, Oreg.	Boston, Mass.	Wheat.	8,275		
Eastmoor	9	18	00	9	19	16	9	21	50	9	21	50		Portland, Oreg.	Boston, Mass.	War Dept. gen.	229		
Cambrai	9	1	30	10	6	15	10	13	40	10	13	40		Portland, Oreg.	Brooklyn, N. Y.	Lumber.	7,147	7,082	5,167
Charles R.	9	19	00	10	6	37	10	15	00	10	15	00		Seattle, Wash.	Baltimore, Md.	Lumber.	211	2,597	1,587
McCormick	9	22	30	10	7	05	10	16	10					Seattle, Wash.	Cristobal, C. Z.	Lumber.	7,284	6,581	4,795
Champerico	10	3	30	10	7	28	10	17	20	10	17	20		Champerico, Guat.	Philadelphia, Pa.	Frozen, general.	6,118	10,921	7,559
Lesmar	10	12	30	10	9	55	10	19	05	10	19	05		Cairns, N. Z.	London, England.	General.	2,452	6,033	4,353
Limerick ¹⁰	9	18	23	10	9	55	10	19	05	10	19	05		Cairns, N. Z.	New York, N. Y.	General.	5,420	5,084	4,070
Venezuela	9	17	25	10	11	25	10	18	35					Everett, Wash.	Baltimore, Md.	General.	6,151	7,473	5,536
Willaro	10	11	30	10	12	15	10	19	35	10	19	35		Everett, Wash.	Baltimore, Md.	General.	3,322	6,529	4,239
Robin Good-fellow	10	11	50	10	12	23	10	20	25	10	20	25		Tacoma, Wash.	Baltimore, Md.	Lumber, general.	8,487	2,520	1,912
Point Garda	10	12	30	10	13	08	10	21	15	10	21	15		Tacoma, Wash.	New Orleans, La.	General.	3,500	7,846	5,112
Benvenue.	10	12	30	10	13	40	10	21	35	10	21	35		Vancouver, B. C.	New Orleans, La.	General.	8,467	7,892	5,858
Thyna.	10	14	10	10	14	58	10	22	55	10	22	55		San Jose, Peru.	Middle gth, England	Guano.	5,180	5,653	4,122
Niagara ¹¹	11	4	15	11	6	19	11	13	15	11	13	15		Balboa, C. Z.	Tampa, Fla.	Guano.	8,018	3,668	2,308
Baron Wenys.	11	4	15	11	6	19	11	13	15	11	13	15		Antofagasta, Chile.	Cristobal, C. Z.	Guano (phos'tic)	7,013	9,139	6,666
Lio ¹⁰	11	9	50	11	10	42	11	18	10	11	18	10		Los Angeles, Calif.	Portland, Maine.	Gasoline.	5,553	4,929	3,345
Pacific	11	2	35	11	10	56	11	18	25	11	18	25		Vancouver, B. C.	Glasgow, Scotland.	General.	8,467	7,892	5,858
Slipper ¹⁰	11	10	25	11	11	20	11	19	25	11	19	25		Vancouver, B. C.	New York, N. Y.	General.	8,063	8,201	6,225
Eagle ¹⁰	11	12	05	11	12	55	11	20	30	11	20	30		Seattle, Wash.	New York, N. Y.	General, lumber.	5,180	5,653	4,122
Sacramento.	11	14	00	11	15	10	11	20	30	11	20	30		San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	489	3,668	2,308
Sacramento.	11	14	00	11	15	10	11	20	30	11	20	30		San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	489	3,668	2,308
Portland ¹⁰	11	23	30	12	7	02	12	13	50	12	13	50		Vancouver, B. C.	Hamburg, Germany	General.	8,018	9,139	6,666
Triumph ¹⁰	11	23	30	12	7	02	12	13	50	12	13	50		Vancouver, B. C.	Hamburg, Germany	General.	8,018	9,139	6,666
Yorkmoor	11	21	15	12	7	55	12	16	00	12	16	00		Victoria, B. C.	New York, N. Y.	Lumber.	5,553	4,929	3,345
Barat.	12	11	45	12	12	15	12	16	55	12	16	55		Guayquil, Ecuador.	W. Hartlepool, Eng.	Lumber.	475	1,182	742
Mobile City	12	11	45	12	12	15	12	16	55	12	16	55		Guayquil, Ecuador.	W. Hartlepool, Eng.	Lumber.	475	1,182	742
Havans Maru.	12	9	25	12	14	18	12	21	22	13	10	10		Hankow, China.	Avonmouth, Eng.	General.	7,759	7,330	5,241
Montanan.	13	5	00	13	6	27	13	20	30	13	20	30		Seattle, Wash.	Boston, Mass.	General.	2,481	6,538	4,769

¹² Light fuel distillate.¹³ Wheat, lumber, and dried fruit.¹⁴ Coffee, skins, and general.¹⁵ For orders.¹⁶ Survey ship.¹⁷ Barley and canned fruit.¹⁸ Motor ship.¹⁹ Coffee, cacao, and sugarcane.

Maple Branch.	13	3 40	13	7 34	13	14 50	13	15 30	British.	Nautilus S. S. Co.	400 0	52 0	23 0	Corral, Chile.	Liverpool, England	General.	6,407 ¹	5,618	4,116
Gen. Wm. M. Graham ¹⁸ .									American.	U. S. Army.	160 2	32 0		Balboa, C. Z.	Cristobal, C. Z.	Lumber.	4,517	4,716	3,235
Borgested ²⁰ .	13	10 50	13	11 47	13	18 50	13	18 50	Norwegian.	Christen Knauden.	351 3	51 4	24 0	Vancouver, B. C.	Port Newark, N. J.				
Santa										Grace Line.	466 0	64 0	25 1	Valparaiso, Chile.	New York, N. Y.	General.	4,039	10,667	6,633
Barbara ²⁰ .	13	10 00	13	12 40	13	18 50	14	2 05	American.	Nave Libera Tristina.	436 6	55 4	28 0	Vancouver, B. C.	Venice, Italy.	General.	8,757 ¹		
Feltre ¹⁸ .	13	16 25	13	16 25	14	11 40	14	18 00	Italian.	Campbell Brothers.	406 0	54 1	23 0	Suva, Fiji Islands.	United Kingdom ²² .	Raw sugar.	7,440	6,161	4,559
Dalfram.	13	19 00	13	19 45	14	11 35	14	11 35	British.										

¹⁸ Mine planter.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 7.	Calamares.	United Fruit Co.	Port Limon, Costa Rica.	September 7.	Orinoco	Hamburg-American Line.	Hamburg via waypoints.
September 7.	Irona.	United Fruit Co.	Puerto Colombia.	September 7.	No. 9776 ¹⁹ .	Pan American Airways.	Miami via waypoints.
September 7.	No. 9137 ¹⁹ .	Pan American Airways.	Miami via waypoints.	September 7.	Calamares.	United Fruit Co.	New York via Habana.
September 8.	Tolosa.	United Fruit Co.	New York via Habana.	September 7.	Heredia.	United Fruit Co.	New Orleans via waypoints.
September 8.	No. 9670 ¹⁹ .	Pan American Airways.	San Salvador and waypoints.	September 8.	No. 945-M ¹⁹ .	Pan American-Grace Airways.	Talara via waypoints.
September 8.	Cundinamarca C-33 ¹⁹ .	United Fruit Co.	Barraququilla and waypoints.	September 8.	Irona.	United Fruit Co.	Bocas and Limon.
September 8.	Carare.	Elders & Fyffes, Ltd.	Avonmouth via waypoints.	September 9.	Marques de Comillas.	Spanish Line.	Barcelona and waypoints.
September 9.	Belay.	Aluminum Line.	Houston via waypoints.	September 9.	Carare.	United Fruit Co.	Port Limon, Costa Rica.
September 10.	Santa Marta.	United Fruit Co.	New York via Kingston.	September 10.	No. 9685 ¹⁹ .	Elders & Fyffes, Ltd.	Tolosa.
September 10.	Castilla.	United Fruit Co.	New Orleans, La.	September 10.	No. 9137 ¹⁹ .	Pan American Airways.	San Salvador and waypoints.
September 10.	No. 142-M ¹⁹ .	Pan American Airways.	Miami via waypoints.	September 10.	Belay.	Pan American Airways.	Miami via waypoints.
September 10.	No. 9664 ¹⁹ .	Pan American Airways.	San Salvador via waypoints.	September 11.	Anachucua ²⁰ .	Aluminum Line.	Georgetown and waypoints.
September 11.	Hercules.	Royal Netherlands S. S. Co.	Amsterdam via waypoints.	September 11.	Annetta I. ²⁰ .	United Fruit Co.	Colon, Rep. of Panama.
September 11.	Bogota.	Colombian S. S. Line.	New York via waypoints.	September 11.	No. 144-M ¹⁹ .	A. Tagaropolos	Colon, Rep. of Panama.
September 11.	Comedian.	T. & J. Harrison.	Liverpool via waypoints.	September 11.	Santa Marta.	Pan American Airways.	Pt. Cabello and waypoints.
September 11.	Anachucua ²⁰ .	United Fruit Co.	Colon, Rep. of Panama.	September 11.	Castilla.	United Fruit Co.	New York via waypoints.
September 11.	Annetta I. ²⁰ .	A. Tagaropolos.	Colon, Rep. of Panama.	September 12.	Hercules.	Royal Netherlands S. S. Co.	Puerto Colombia.
September 12.	Aucion.	Panama R. R. S. S. Line.	New York via Haiti.	September 12.	Irona.	United Fruit Co.	Paramaribo.
September 12.	Camden.	United Fruit Co.	Port Limon, Costa Rica.	September 12.	Cundinamarca C-33 ¹⁹ .	Standard Fruit & S. S. Co.	Barranquilla and waypoints.
September 12.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via Habana.	September 13.	Bogota.	Colombian S. S. Line.	New Orleans and waypoints.
September 12.	Inapaguina ²⁰ .	A. Tagaropolos.	Colon, Rep. of Panama.	September 13.	Atlantida.	Atlantic.	New Orleans and waypoints.
September 13.	Nueva Espana ²⁰ .	Diez & Garcia.	Colon, Rep. of Panama.	September 13.	Mary V. ²¹ .	Standard Fruit & S. S. Co.	San Andres, Colombia.
September 13.	Mary V. ²¹ .	E. Hawkins.	Colon, Rep. of Panama.	September 13.	Camden.	United Fruit Co.	Caracas via waypoints.
September 13.	Dora K. ²¹ .	A. L. Surgeon.	Colon, Rep. of Panama.	September 13.	Dora K. ²² .	A. L. Surgeon.	Bluefields and Pt. Limon.
September 13.	No. 144-M ¹⁹ .	Pan American Airways.	Pt. Cabello and waypoints.	September 13.	Inapaguina ²⁰ .	A. Tagaropolos	Colon, Rep. of Panama.
September 13.	No. 9685 ¹⁹ .	Pan American Airways.	San Salvador and waypoints.	September 13.	Nueva Espana ²⁰ .	Diez & Garcia.	Colon, Rep. of Panama.
September 13.	No. 9776 ¹⁹ .	Pan American Airways.	Miami via waypoints.				
September 13.	No. 300-N ¹⁹ .	Pan American Airways.	Talara via waypoints.				
September 13.	Cartago.	United Fruit Co.	New Orleans via Habana.				

¹⁹ Air mail carrier. ²⁰ Motor boat. ²¹ Motor schooner. ²² Motor ship.

PORT OF BALBOA.

September 8.	Cauca ²¹ .	National Navigation Co.	Pto. Armuelles, Panama.	September 8.	Cauca ²¹ .	National Navigation Co.	Buenaventura, Colombia.
September 12.	Nueva Panama ²¹ .	Hans Elliot.	Panama Bay, R. P.	September 9.	Nueva Panama ²¹ .	Hans Elliot.	Panama Bay, R. P.

²¹ Motor ship.

* Other than ships passing through the Canal.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, August, 1930.—Continued from page 87.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.				ASIA.				Grand total.	Per cent of total cargo.				
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total South America.	Australia.	New Zealand.	Australasia. ²	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. ¹	Total, Asia.	
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports.....	163,515	174	474	1128,447	172,722	9,290	639	4113,788	3,977	18,135	13,792	4,782				18,574	9,490	13,457	18,617	15,805	57,369	266,800	39.3	
South Atlantic ports.....	3,306				5,306												266	216	2,249	1,015	3,746	9,052	1.3	
Gulf ports.....	45,501				533	46,034	4,667	30	189	159	490	5,535	21,165	4,247	1,478	26,890	629	18,396	35,834	1,921	56,880	135,339	19.9	
Total, United States.....	214,322	174	474	1128,980	224,062	13,957	699	6003,947	4,467	23,670	34,957	9,029	1,478			45,464	10,385	32,069	56,800	18,741	117,995	411,191	60.5	
East coast of Canada.....		3,200			7,200							2,247	3,935			6,182						13,382	2.0	
East coast of Central America.....					8,726	993	616	830	683		1,196	4,318	1		7,200	12,001						20,791	3.1	
Costa Rica, C. Z. ²		48			14,074			4,506			6	4,512				1						13,045	1.9	
West Indies.....		8,042	2,927																			18,586	2.7	
Total, North America.....	225,057	11,510	5,428	3,087	8,980	254,062	23,740	1,315	5,936	4,630	5,669	41,290	42,006	12,964	8,678	63,648	10,385	32,069	56,800	18,741	117,995	476,995	70.2	
Europe:																								
British Isles.....	5,252	6,885	1,700		13,927	1,935				108	2,119	4,102	3,205	37,880	497	41,582						59,671	8.8	
Belgium.....	10,936	2,781	150	30	13,897	5,120	259			255	511	370	6,515									20,412	3.1	
Denmark.....					26	23				24		234	281									307	0.0	
France.....	2,238	1,069	15		3,322											1,484	1,484					4,806	0.7	
Germany.....	7,204	5,974	343		8,411	3,398	1,143	268	1,293	46	6,148											14,259	2.1	
Holland.....	12,870	5,974			18,844	1,849	30	820	2,394	128	5,131											23,975	3.5	
Italy.....	8,220	75	17		8,322	12				3	1,121	1,136				1,199						2,458	0.4	
Norway and Sweden.....	6,555	170	995	807	8,527	4,409	782	668			87	87		10								15,585	2.3	
Spain and Portugal.....	2,006	6,155			8,155																	8,242	1.2	
Europe.....	4,270	1,915	1,802		7,987	2,727				167	20,577	23,471										31,458	4.6	
Total, Europe.....	52,581	25,588	4,760	1,180	84,118	19,473	1,432	2,149	5,054	24,682	52,790	4,394	37,890	1,981	44,265							181,173	26.7	
East coast of South America.....				25				93			13	106						52	953			1,035	13,539	2.0
Africa.....																			7,700			7,700	7,700	1.1
Grand total.....	287,601	39,538	10,197	2,928	9,930	350,608	43,213	2,840	8,085	9,684	430,364	494,186	46,400	50,854	10,659	107,913	10,385	32,121	65,453	18,741	126,700	679,407	100.0	
Per cent of total cargo:																								
August, 1930.....	42.4	5.8	1.5	0.6	1.3	51.6	6.4	0.4	1.2	1.4	4.5	13.9	6.8	7.5	1.6	15.9	1.5	4.7	9.6	2.8	18.6	100.0	.....
August, 1929.....	44.0	2.3	3.0	0.5	1.4	50.5	6.3	0.5	0.3	1.9	4.6	14.1	7.0	7.7	0.7	15.4	2.0	5.9	10.9	1.2	20.0	100.0	.....
August, 1928.....	40.4	1.8	3.0	0.2	1.0	46.4	6.3	1.0	0.8	1.9	3.6	13.6	8.8	5.5	1.3	15.6	2.1	5.3	11.3	5.7	24.4	100.0	.....

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, August, 1930.

(Figures represent tons of 2,240 pounds.)

From —	North America.										Europe.										Grand total.	Per cent of total cargo.					
	UNITED STATES.					North America.					Europe.																
	North Atlantic ports.	South Atlantic ports.	Gulf ports.		Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe,†			Total, Europe.	East coast of South America.	Egypt.	Africa.	
NORTH AMERICA:																											
West coast of U. S.	484,127	3,264	24,714	512,105	2,644	1,632	16,199	52,640	175,619	5,785	1,272	4,754	15,743	5,336	2,205	2,430	250	21,957	234,991	5,420	199	773,151	52.6				
West coast of Canada.	17,911	843	18,754	7,014	3,674	29,442	63,215	2,985	601,900	156	139	716	91	3	13	25	12	1,037	81	31,300	119,961	1,152	20	150,575	10.3		
W. coast of Cen. Amer.	57	57	57	57	916	402	1,375	556	156	7,377	190	159	159	159	159	159	159	159	159	7,733	3,138	308	0.6	9,108	0.6		
Bahama, C. Z.	308	308	308	308	23,141	960	960	960	960	23,141	960	159	159	159	159	159	159	159	159	1,318	24,439	1.7	24,439	1.7			
Hawaiian Islands	8,571	14,570	23,141	308	23,141	960	960	960	960	23,141	960	159	159	159	159	159	159	159	159	1,318	24,439	1.7	24,439	1.7			
Total, N. America																											
SOUTH AMERICA:																											
Chile.	165,056	4,593	2,087	171,736	1,283	539	1,027	175,235	21,511	1,714	4,284	2,156	789	547	547	547	547	547	547	42,090	72,215	121	247,571	16.9			
Colombia.	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	883	
Ecuador.	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	22,853	
Peru.	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	21,553	
W. coast of S. America	28	28	28	28	2	1,680	1,683	2,906	14,488	400	193	122	1,534	2,320	9	2,950	75	3,155	16,846	38,912	75	3,155	98,468	6.7			
Total, S. America																											
AUSTRALASIA:																											
Australia.	13,690	13,690	13,690	13,690	58	15,250	501	37,157	33,642	3,100	1,714	4,284	2,156	789	547	547	547	547	547	42,090	72,215	121	247,571	16.9			
New Zealand.	1,700	1,700	1,700	1,700	58	2,038	33,642	3,100	14,488	400	193	122	1,534	2,320	9	2,950	75	3,155	16,846	38,912	75	3,155	98,468	6.7			
Australasia †	6,291	6,291	6,291	6,291	58	23,599	37,243	23,599	37,243	3,100	1,714	4,284	2,156	789	547	547	547	547	547	42,090	72,215	121	247,571	16.9			
Total, Australasia																											
ASIA:																											
Philippine Islands	24,505	12,652	37,157	3,262	677	37,157	3,262	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	3,939	
China.	3,262	3,262	3,262	3,262	677	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	3,262	
Japan.	5,219	5,219	5,219	5,219	63	13,862	17,778	2,030	17,778	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	2,030	
Far East †	3,916	3,916	3,916	3,916	58	23,599	37,243	23,599	37,243	3,100	1,714	4,284	2,156	789	547	547	547	547	547	42,090	72,215	121	247,571	16.9			
Total, Asia																											
Grand total																											
Per cent of total cargo:																											
August, 1930.	53.1	0.5	3.7	57.3	3.2	0.3	0.7	2.4	63.9	21.7	0.7	0.1	0.7	1.6	1.5	0.2	0.8	0.5	7.8	35.6	0.5	100.0	100.0	
August, 1929.	50.1	2.0	7.5	59.6	3.4	0.2	0.6	0.4	64.2	17.2	1.8	0.1	2.2	1.4	0.5	0.7	0.4	0.5	8.5	33.3	0.7	1.5	0.3	100.0	100.0
August, 1928.	49.6	1.1	2.4	53.1	4.1	0.5	1.3	1.1	60.1	22.5	0.8	0.1	0.6	2.5	1.9	0.5	0.6	0.1	9.6	39.2	0.3	0.4	0.4	100.0	100.0

* General cargo not routed so as to allow segregation between definite ports.

† Includes both local and transit cargo.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cerigo.....	North German Lloyd.....	.....	August 31.....	.....	99
Cristobal.....	Panama R. R. S. S. Line.....	.....	August 31.....	.....	809
Acajutla.....	Pacific Steam Navigation Co.....	.....	September 6.....	.....	739
Santa Maria.....	Grace Line.....	.....	August 31.....	.....	191
Parismina.....	United Fruit Co.....	.....	August 31.....	.....	3
Peter Kerr.....	States S. S. Line.....	.....	August 31.....	.....	(²)
Ulua.....	United Fruit Co.....	August 31.....	August 31.....	17	102
Amasis.....	Hamburg-American Line.....	August 31.....	August 31.....	29	64
Caldas.....	United Fruit Co.....	September 1.....	.....	(¹)	.....
Santa Elisa.....	Grace Line.....	September 1.....	September 1.....	286	(²)
Darian.....	Leyland Line.....	September 1.....	September 2.....	340	(²)
Calamares.....	United Fruit Co.....	September 1.....	September 3.....	399	54
Cauca.....	United Fruit Co.....	September 1.....	September 3.....	(¹)	315
Simon Bolivar.....	Royal Netherlands S. S. Co.....	September 1.....	September 3.....	12	2
C. C. Aeme.....	M. Newball.....	September 1.....	September 3.....	15	6
Schwaben.....	North German Lloyd.....	September 2.....	September 2.....	13	169
Boskoop.....	Royal Netherlands S. S. Co.....	September 2.....	September 3.....	271	194
Durazzo.....	Hamburg-American Line.....	September 3.....	.....	634	.....
Aconcagua.....	Chilean Line.....	September 3.....	September 3.....	17	(²)
Orinoco.....	Hamburg-American Line.....	September 3.....	September 3.....	125	(²)
George Washington.....	Fred Olsen & Co.....	September 3.....	September 3.....	(¹)	102
Swiftwind.....	C. D. Mallory & Co.....	September 3.....	September 3.....	11,910	(²)
Zacapa.....	United Fruit Co.....	September 3.....	September 3.....	548	57
Macoris.....	French Line.....	September 3.....	September 4.....	108	598
Santa Clara.....	Grace Line.....	September 3.....	September 4.....	128	99
Iriona.....	United Fruit Co.....	September 3.....	September 4.....	588	104
Tela.....	United Fruit Co.....	September 3.....	September 6.....	6	140
Amerika.....	United Fruit Co.....	September 4.....	September 4.....	6	(²)
Pearl Marie.....	R. Feuillebois.....	September 4.....	September 4.....	(¹)	40
Baracoa.....	United Fruit Co.....	September 4.....	September 5.....	1	168
Bennekom.....	Royal Netherlands S. S. Co.....	September 4.....	September 5.....	891	202
Oroya.....	Pacific Steam Navigation Co.....	September 4.....	September 5.....	95	89
Arana.....	Pacific Steam Navigation Co.....	September 4.....	September 5.....	27	66
Iowa.....	French Line.....	September 5.....	September 5.....	619	(²)
Simon Bolivar.....	Royal Netherlands S. S. Co.....	September 5.....	September 6.....	6	529
Moerdyk.....	Pacific Steam Navigation Co.....	September 5.....	September 6.....	239	283
Dintledyk.....	Pacific Steam Navigation Co.....	September 5.....	September 6.....	67	(²)
Amapala.....	Standard Fruit Co.....	September 5.....	September 6.....	44	365
Guayaquil.....	Panama R. R. S. S. Line.....	September 6.....	.....	1,367	.....
Heredia.....	United Fruit Co.....	September 6.....	.....	344	.....
Santa Tecla.....	N. O. & S. A. S. S. Co.....	September 6.....	.....	103	.....
Marques de Comillas.....	Spanish Line.....	September 6.....	.....	126	.....
San Francisco.....	Hamburg-American Line.....	September 6.....	.....	29	.....
Ruhr.....	Hamburg-American Line.....	September 6.....	.....	316	.....
Liberator.....	Tampa Intercean Co.....	September 6.....	.....	179	.....

* No cargo discharged.

* No cargo laded.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.....	September 16.....	September 21.....	September 24.....	September 28.....	October 1.....	October 6.....
Ancon *.....	September 30.....	October 5.....	October 8.....	October 12.....	October 15.....	October 20.....
Cristobal.....	October 15.....	October 20.....	October 23.....	October 28.....	October 31.....	November 5.....
Ancon.....	October 28.....	November 2.....	November 5.....	November 9.....	November 12.....	November 17.....
Cristobal.....	November 11.....	November 16.....	November 19.....	November 23.....	November 26.....	December 1.....
Ancon.....	November 25.....	November 30.....	December 3.....	December 7.....	December 10.....	December 15.....
Cristobal.....	December 9.....	December 14.....	December 17.....	December 21.....	December 24.....	December 29.....
Ancon.....	December 23.....	December 28.....	December 31.....	January 4.....	January 7.....	January 12.....

* Effective April 30, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure after S. S. *Cristobal*, Sept. 16th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reconsigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.24
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

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CANAL WORK IN AUGUST, 1930.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of August, 1930.

BALBOA HEIGHTS, C. Z., September 18, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of August, 1930:

NUMBER OF TRANSITS.

During the month, 465 commercial vessels and 19 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 41 vessels belonging to the United States Government and 1 transit of a Panamanian Government vessel, on which no tolls were collected, making a total of 526 transits for the month, or a daily average of 16.97.

Tolls on the 465 commercial vessels amounted to \$2,080,230.42, and on the launches to \$111.00, a total of \$2,080,341.42, or a daily average on all traffic of \$67,107.79.

The decline in volume of commercial traffic continues. Traffic for the past month as compared with July, 1930, shows a decrease of 23 transits and \$100,281.40 in tolls, and in comparison with the traffic in August, 1929, a decrease of 76 transits and \$247,207.44 in tolls. Traffic in the first 8 months of the current calendar year has fallen off to the extent of 360 transits, \$842,103.82 in tolls, and 2,148,637 in tons of cargo as compared with the corresponding period last year; the percentages of decrease have been: Transits, 8.4; tolls, 4.6; cargo, 10.2 per cent.

The total numbers of craft of all kinds transiting the Canal during the month of August, 1930, as compared with the same month in 1929 and 1928, are shown in the following tabulation:

	August, 1928.	August, 1929.	August, 1930.
Commercial vessels.....	526	541	465
Launches (under 20 tons).....	6	6	19
Noncommercial vessels:			
United States Government.....	24	28	41
Panamanian Government.....		1	1
Colombian Government.....	1		
Vessels for repairs.....	6	4	
Total.....	563	580	526

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	4	5	9
Pedro Miguel.....	15	15	30
Miraflores.....	15	18	33
Total.....	34	38	72

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year 1930 to the end of August, 1930, as compared with the same months in the previous year.

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,423,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March...	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April...	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May...	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June...	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July...	527	488	2,468,230	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August...	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
Total...	4,296	3,936	20,132,302	19,517,176	21,112,502	18,963,865	18,351,101.91	17,508,998.09

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for August in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	August, 1928.	August, 1929.	August, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	526	541	465	515
Panama Canal net tonnage.....	2,437,246	2,558,739	2,345,573	2,498,385
United States net tonnage.....	1,856,567	1,943,876	1,751,764	1,890,255
Registered gross tonnage.....	3,057,243	3,195,903	2,911,378	3,119,221
Registered net tonnage.....	1,870,211	1,952,479	1,770,645	1,899,802
Tolls.....	\$2,199,069.31	\$2,327,437.86	\$2,080,230.42	\$2,256,407.50
Tons of cargo.....	2,425,336	2,680,730	2,148,469	2,502,519

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	August, 1928.	August, 1929.	August, 1930.	
Number of transits.....	16.97	17.45	15.00	16.95
Panama Canal net tonnage.....	78,621	82,540	75,664	82,139
Tolls.....	\$70,937.72	\$75,078.64	\$67,104.21	\$74,183.26
Tons of cargo carried.....	78,236	86,475	69,305	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of August in 1928, 1929, and 1930 are shown in the following tabulation:

	Average per vessel.		
	August, 1928.	August, 1929.	August, 1930.
Panama Canal net tonnage.....	4,633	4,730	5,044
United States net tonnage.....	3,530	3,593	3,767
Registered gross tonnage.....	5,812	5,907	6,261
Registered net tonnage.....	3,555	3,609	3,808
Tolls.....	\$4,180.74	\$4,302.10	\$4,473.61
Tons of cargo (including vessels in ballast).....	4,611	4,955	4,620
Tons of cargo (laden vessels only).....	5,525	5,802	5,344

NATIONALITY OF VESSELS.

Fifteen nationalities were represented in the commercial traffic passing through the Canal in August, 1930. Vessels with United States registry, with 214, led in the number of transits, while those of British registry, with 107, were second; vessels of these two nationalities made 69.0 per cent of the total transits for the month. Germany and Norway were next with 34 transits each.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of August, 1930, was 2,148,469 tons. Cargo from the Atlantic to the Pacific aggregated 679,407 tons, as

compared with 575,964 tons in July, 1930, and 858,661 tons in August, 1929. From the Pacific to Atlantic there were 1,469,062 tons, as compared with 1,826,083 tons in July, 1930, and 1,822,069 tons in August, 1929.

From the Atlantic to Pacific various manufactured goods, totaling 182,763 tons, constituted the heaviest item of traffic, followed by mineral oils with 61,781 tons, phosphates with 36,437 tons, sulphur with 34,120 tons, and cement with 25,189 tons. There was a decrease of 179,254 tons of cargo, or 20.9 per cent, in this direction as compared with August, 1929, caused by a general curtailment in shipments of practically all commodities, but principally manufactured iron and steel, which declined 84,226 tons, or 39.5 per cent.

From the Pacific to Atlantic, mineral oil shipments totaling 460,879 tons, were the heaviest item, followed by lumber with 194,150 tons, ores (principally iron) with 173,096 tons, wheat with 142,044 tons, nitrates with 66,917 tons, and sugar with 63,513 tons. There was a decrease of 353,007 tons of cargo, or 19.4 per cent, in this direction, as compared with August, 1929. Mineral oil shipments declined 93,958 tons, or 16.9 per cent; lumber, 177,648 tons, or 47.8 per cent; and nitrates, 97,366 tons, or 59.3 per cent. Wheat increased 47,212 tons, or 49.8 per cent, in comparison with the same month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.916 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.72 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of August, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$14,406.25	\$13,109.00		\$1,297.25
British.....	520,901.61	565,395.60	\$44,493.99	
Chilean.....	12,915.00	14,049.00	1,134.00	
Colombian.....	1,067.30	900.00		167.30
Danish.....	35,006.09	34,691.20		314.89
Danzig.....	17,984.45	18,080.00	95.55	
Dutch.....	44,310.00	54,796.00	10,486.00	
French.....	43,844.75	50,366.20	6,521.45	
German.....	102,784.10	113,197.00	10,412.90	
Italian.....	25,813.75	29,367.00	3,553.25	
Japanese.....	70,327.85	68,123.00		2,204.85
Norwegian.....	135,620.18	154,431.40	18,811.22	
Panamanian.....	5,044.20	4,209.00		835.20
Swedish.....	41,108.08	48,376.40	7,268.32	
United States.....	1,009,096.81	1,037,868.80	28,766.99	
Total.....	2,080,230.42	2,207,454.60	132,043.67	4,819.49
Net increase for all traffic.....		127,224.18	127,224.18	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$20,767.89
United States foreign trade.....	9,817.70
United States—Canal Zone trade.....	1,818.60
Net increase.....	28,766.99

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement of vessels transiting the Panama Canal in August, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	1.04	1.69	1.45
British.....	.70	1.27	.99
Chilean.....	.34	.39	.36
Colombian.....	1.55	.80	1.17
Danish.....	.74	1.74	1.27
Danzig.....		1.70	1.70
Dutch.....	.53	1.19	.89
French.....	.35	1.38	.83
German.....	.63	1.40	1.00
Italian.....	.30	1.37	.51
Japanese.....	.94	1.21	1.10
Norwegian.....	1.07	1.47	1.27
Panamanian.....	1.24		1.24
Swedish.....	.84	1.96	1.50
United States.....	.76	1.38	1.12
Averages, August, 1930.....	.73	1.37	1.07
Averages, August, 1929.....	.85	1.48	1.20
Averages, August, 1928.....	.85	1.45	1.18

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of August is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	27,240	\$28,276.25	44	244,744	\$250,683.90
Ballast.....	43	246,750	177,682.86	2	7,370	5,306.40
General cargo ships:						
Laden.....	179	901,080	796,458.05	171	827,099	755,930.00
Ballast.....	15	82,783	59,707.41	2	8,065	5,806.80
Noncargo-carrying ships:						
Yachts.....	1	328	245.25	2	114	133.50
Total.....	244	1,258,181	1,062,369.82	221	1,087,392	1,017,860.60
Method of propulsion:						
Steam.....	169	852,497	747,048.34	160	768,240	725,778.34
Motor.....	75	405,684	315,321.48	60	319,097	292,016.26
Motor schooner.....				1	55	66.00
Total.....	244	1,258,181	1,062,369.82	221	1,087,392	1,017,860.60

Of the 329 steam-driven vessels, 262 were oil burning, 63 coal burning, and 4 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of August, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships	1	¹ 10,600	\$5,300.00			
Cruisers	1	¹ 8,900	4,450.00	2	¹ 11,644	\$5,832.00
Gunboats				1	¹ 1,575	787.50
Launches	3	¹ 15	10.80			
Submarines	6	¹ 5,168	2,584.00	5	¹ 4,292	2,146.00
Supply ships	1	¹ 3,434	4,292.50			
Survey ships	1	¹ 2,600	1,300.00	1	¹ 2,600	1,300.00
Transports	1	¹ 3,992	4,990.00	1	¹ 3,992	4,990.00
Tugs	2	¹ 2,000	1,000.00	2	¹ 2,000	1,000.00
U. S. Army vessels:						
Ferry boats	1	¹ 191	143.25			
Mineplanters	1	¹ 1,208	604.00	2	¹ 2,416	1,208.00
Transports	5	¹ 20,941	26,176.25	3	¹ 13,580	16,975.00
U. S. Treasury vessels:						
Cutters				1	¹ 1,181	590.50
Total, U. S. Government	23		50,850.80	18		34,829.00
Panamanian Government vessels:						
Transports				1	¹ 101	72.72
Grand total	23		50,850.80	19		34,901.72

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of August, 1930, carried cargo as follows: Atlantic to Pacific, 7,270 tons, Pacific to Atlantic, 1,638 tons; total, 8,908 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of August, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific	12	90	\$74.25
Pacific to Atlantic	7	46	36.75
Total	19	136	111.00

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of August, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving	71,619	50,557	122,176
Local cargo shipped	11,164	726	11,890
Transit cargo arriving	2,193,991	2,194,000	4,387,991
Transit cargo clearing	2,214,545	2,211,399	4,425,944
Cargo received for transshipment	21,498	1,139	22,637
Cargo transhipped	22,976	987	23,963
"Canal Zone for Orders" cargo:			
Number of receipts issued	104	37	141
Number of withdrawals	648	215	863
Tons received	1,545	235	1,780
Tons withdrawn	1,898	161	2,059
Packages received	7,823	2,258	10,081
Packages withdrawn	7,388	1,933	9,321
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company	40	3	43
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company	10,340	781	11,121
Coal issued, miscellaneous:			
Panama Canal departments	35	4	39
U. S. Army, including vessels	9		9
Individuals and companies	19		19
Transferred to Navy	785		785
Total sales and issues	11,188	785	11,973

		Cristobal.	Balboa.	Total.
Coal on hand, August 1, 1930.....	tons	104,533		104,533
Coal on hand, September 1, 1930.....	tons	93,345		93,345
Coal received during month.....	tons			
Coal received from Navy.....	tons		785	785
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments.....	bbls.	7,460.13	16,329.26	23,789.39
Panama Railroad Company.....	bbls.	150.00	103.64	253.64
U. S. Army and Navy.....	bbls.	526.00	145.57	671.57
Individuals and companies.....	bbls.		362.95	362.95
Total sales and issues.....	bbls.	8,136.13	16,941.42	25,077.55
Inventory adjustment.....	bbls.	1 406.01	2 301.15	3 104.86
Fuel oil on hand September 1, 1930.....	bbls.	58,526.84	88,977.80	147,504.64
Diesel oil sold during August, 1930.....	bbls.		3,523.18	3,523.18
Inventory shortage.....	bbls.		8.74	8.74
Diesel oil on hand September 1, 1930.....	bbls.	1,082.50	14,604.97	15,687.47
Miscellaneous transfers.....	bbls.	447.41	10,276.35	10,723.76
Gasoline and kerosene pumped for The Panama Canal.....	bbls.	12,477.16	29,276.51	41,753.67
Gasoline pumped for individuals and companies.....	bbls.	893.77	6,740.55	7,634.32
Oil pumped for individuals and companies:				
Receipts.....	bbls.	315,668.76	292,032.56	607,701.32
Issues.....	bbls.	230,530.90	282,189.06	512,719.96
Oil pumped for U. S. Navy.....	bbls.	8,801.00	4,202.00	13,003.00
Total fuel oil, gasoline, and kerosene handled.....	bbls.	576,955.13	645,181.63	1,222,136.76
Admeasurement of vessels:				
U. S. equivalent certificates issued.....		14	3	17
Measured for Panama Canal net tonnage.....		3	1	4
Remeasured for Panama Canal net tonnage.....		12	3	15
Panama Canal net tonnage corrected.....		3	6	9
U. S. equivalent tonnage corrected.....		6	12	18
Services of harbor equipment:				
Tugs, total operating hours.....		340½	270½	610½
Launches, total operating hours.....		1,317½	1,530½	2,848
Revenue from tug service, pilotage, etc.:				
Tug revenue.....		\$11,198.00	\$9,283.75	\$20,481.75
Pilotage.....		18,024.00	8,790.00	26,814.00
Seamen.....		11,664.00	10,368.00	22,032.00
Launch service.....		1,809.00	3,173.00	4,982.00
Wharfage.....		15,377.14	6,553.34	21,930.48
Ships measured.....		75.00	50.00	125.00
Miscellaneous.....		508.51	283.00	791.51
Ships repaired at Panama Canal shops:				
Commercial.....		41	11	52
U. S. Army and Navy.....		5	3	8
Panama Canal equipment.....		6	9	15
Total.....		52	23	75
Vessels dry docked:				
Commercial.....		3	5	8
U. S. Army and Navy.....			1	1
Panama Canal equipment.....			2	2
Total.....		3	8	11
Clearances issued.....		281	261	542
Bills of health issued.....		294	262	556

¹ Shortage.² Overage.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal...	538	3,364,834	2,036,085	500	3,071,088	1,869,627
Vessels entering port but not transiting Canal...	72	337,758	200,330	14	53,321	33,047
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	721,947	431,846	109	722,020	424,237
<i>Ships clearing.</i>						
All vessels, including those transiting Canal...	551	3,434,947	2,078,160	501	3,089,234	1,876,630
Vessels clearing port but not transiting Canal...	76	351,427	209,879	14	53,321	33,047
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	125	750,026	448,136	109	722,079	424,318

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,318	943	2,261	138	567	705
From Pacific ports	173	90	263	213	141	354
Total disembarking	1,491	1,033	2,524	351	708	1,059
Embarking:						
For Atlantic ports	1,337	993	2,330	129	227	356
For Pacific ports	202	168	370	288	399	687
Total embarking	1,539	1,161	2,700	417	626	1,043
Remaining on board:						
From Atlantic to Pacific ports	2,090	4,376	6,466	1,974	3,523	5,497
From Pacific to Atlantic ports	1,590	1,454	3,044	1,867	1,386	3,253
From Atlantic to Atlantic ports	723	213	936			
From Pacific to Pacific ports				19	154	173
Total remaining on board	4,403	6,043	10,446	3,860	5,063	8,923
Total arriving	5,894	7,076	12,970	4,211	5,771	9,982
Total departing	5,942	7,204	13,146	4,277	5,689	9,966

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	244	62	25.5
Pacific to Atlantic	221	56	25.3
Total	465	118	25.4

In addition to the aforesaid, 61 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 123 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of August, 1930, 40 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of August, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$2,458.20	\$12,244.82	\$29,258.93	\$377.18	\$7,047.53	\$51,386.66
Government vessels	213.25	1,424.53	7,533.35	69.04	1,447.08	10,687.25
P. R. R. vessels	4.00	283.75	1,362.64	1,149.65	233.22	3,033.26
Total sales, August, 1930	2,675.45	13,953.10	38,154.92	1,595.87	8,727.83	65,107.17
Total sales, August, 1929	3,764.69	16,729.36	51,507.08	1,130.07	9,657.48	82,788.68
Total sales, August, 1928	3,357.34	13,465.26	38,033.07	1,160.09	6,884.06	62,899.82
Sales at Balboa to:						
Commercial vessels	848.75	2,982.43	13,690.05	676.83	13,414.51	31,612.57
Government vessels	376.00	1,991.03	12,616.62	686.33	1,458.33	17,128.81
P. R. R. vessels				33.09		33.09
Total sales, August, 1930	1,224.75	4,973.46	26,306.67	1,396.25	14,873.34	48,774.47
Total sales, August, 1929	1,276.02	11,172.78	21,727.06	1,513.72	5,087.64	40,777.22
Total sales, August, 1928	2,170.09	19,971.90	28,848.44	741.57	5,528.07	57,260.07

The aggregate sales to Government vessels during the month was \$27,816.06; to Panama Railroad vessels, \$3,066.35; and to other commercial vessels, \$82,999.23, making the total sales to all vessels, \$113,881.64. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of August, 1930, as compared with the corresponding month in 1928 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. *			Aug., 1928.	Aug., 1929.	Aug., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	216	230	446	11	13	24	515	516	470
Pedro Miguel.....	216	242	458	14	23	37	535	559	495
Miraflores.....	216	240	456	13	21	34	536	550	490
Number of vessels put through locks.									
Gatun.....	223	244	467	30	39	69	587	593	536
Pedro Miguel.....	221	245	466	40	48	88	615	661	554
Miraflores.....	221	245	466	40	47	87	616	660	553

* Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	45	45	45
Panama Canal equipment.....	9	30	33
Panamanian Government vessels.....	1	1	1
Launches.....	14	12	8

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in August, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,881,540,000	1,475,200,000	1,431,680,000
Leakage.....	40,000,000	13,000,000	20,000,000
Maintenance.....	3,340,000		
Total, August, 1930.....	1,924,880,000	1,488,200,000	1,451,680,000
Total, July, 1930.....	1,948,350,000	1,544,100,000	1,506,700,000
Total, August, 1929.....	2,117,870,000	1,707,630,000	1,651,350,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of August, 1930, are shown in comparative form, in the following tabulation:

	August.		August—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	3,306	1,807	4,724	1,579	2,996
Maximum momentary discharge for the month.....	23,180	6,960	36,100		
Gatun Lake watershed, total yield.....	8,559	4,901	11,656	4,901	8,087
Gatun Lake watershed, net yield.....	8,111	4,303	11,089	4,303	7,552
Draft on Gatun Lake for lockages and power.....	2,968	2,791	2,968	1,390	2,324

* August 21, 1911.

* August, 1914, not included.

* Full power.

The discharge of the Chagres River at Alhajuela was 40 per cent below the 29-year average, or 1,807 c. f. s., compared with an average of 2,996 c. f. s. The maximum momentary discharge for the month was 6,960 c. f. s. at elevation 95.88 feet on the

21st. The minimum discharge was 914 c. f. s. at elevation 92.14 feet on the 12th. The minimum mean monthly discharge on record for the month of August is 4,724 c. f. s. in 1917, and the minimum 1,579 c. f. s. in 1904. The maximum momentary discharge on record for August is 36,100 c. f. s. at elevation 103.50 feet on August 21, 1911.

The total yield of the Gatun Lake watershed for August was 4,901 c. f. s., the lowest during the 17 years of record, and was 39 per cent below the 17-year average for August of 8,087 c. f. s. The maximum total yield of record for August is 11,656 c. f. s. in 1917. The lake varied in elevation from 83.91 feet on the 13th to a maximum of 85.12 feet on the 31st, averaged 84.50 feet, and ended at elevation 85.08 feet, showing a net rise during the month of 0.79 foot.

Miraflores Lake varied between elevations 53.12 feet on the 31st and 54.50 feet also on the 31st, averaged 53.87 feet, and ended at elevation 53.31 feet.

SEISMOLOGY.

One seismic disturbance was recorded during the month, on the 29th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,329,700 kilowatt hours, and the computed water consumption was 4,115,764,815 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 6,800 kilowatt hours, and the fuel oil consumption was 25.75 barrels. The station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 37 vessels during the month. There were 402 work orders issued during the month, as compared with 421 issued during the previous month.

MECHANICAL DIVISION.

During the month of August, 1930, miscellaneous repairs were made on 52 vessels at Cristobal and 23 at Balboa. Three vessels were dry docked at Cristobal and 8 at Balboa. Work was completed and carried forward on several pieces of equipment of The Panama Canal, the United States Army and Navy, and commercial steamship lines.

MUNICIPAL ENGINEERING DIVISION.

Six hundred and ninety-three square yards of concrete pavement was laid at France Field and 850 square yards at Silver City Commissary, Mt. Hope. Improvements around new buildings at Naval Air Station, Coco Solo, included 950 square yards of reinforced concrete pavement.

On the Thatcher Highway the erection of Camp No. 1 was completed except for electric wiring. One and three-quarter miles of rough clearing was done and 7,830 cubic yards of material excavated. The temporary ferry was operated during the month.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 752,228,500 gallons.

DREDGING DIVISION.

The Southwest La Pita slide showed a slight surface movement during the month. The break on the West Lirio slide between stations 1735-00 and 1740-00 W., became active on the 25th, and now extends 400 feet back from the west prism line and about 100 feet above the lake level. There was a depth of 30 feet on the west prism line at station 1740-00 and a depth of 38 feet, 55 feet east of the west prism line at station 1737-60. A slight settlement of this slide at the water's edge also took place between stations 1723-00 and 1725-00 W. The dipper dredge *Paraiso* worked 12½ days on this slide and excavated 47,900 cubic yards of material. The total excavation from this slide to August 31, 1930, amounts to 2,336,270 cubic yards. The general movement of the West Culebra slide along the waterfront continued throughout the month with an average movement of 1.1 feet toward the Canal between stations 1773-00 and 1794-00 W., and 0.7 foot southward between stations 1770-00 and 1778-00 W. Some new breaks developed on the south slope of Zion Hill. The banks around the Lirio run-off culvert at the East Barge Repair slide continued to break down during the

month and the soft material carried to the Canal caused a slight shoaling on the east prism line between stations 1747-00 and 1749-00. A few other bank breaks occurred during the month. There was no interference with shipping on account of slides.

A total of 122,000 cubic yards of sand, gravel, and silt was taken from Folks River borrow pit by suction dredge No. 86, and conveyed by pipe line 4,303 feet to the France Field fill. The dredge worked on a three-watch basis the entire month in the area, with the relay pump barge relaying the material to France Field, except for the last $2\frac{1}{2}$ days of the month, when the dredge operated without the assistance of the relay pump barge, through an average pipeline length of 2,805 feet. Approximately 31 acres, or 83 per cent, of the area of the fill have been completed. A total of 250,500 cubic yards of material has been removed from the borrow pit, of which 186,400 cubic yards remained on the field, giving a run-off of approximately 25 per cent.

The total excavation during August, 1930, was 737,150 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Gaillard Cut—			
West Whitehouse slide.....	200	2,000	2,200
Southwest La Pita slide.....	550	4,850	5,400
Project No. 3.....	8,200	32,900	41,100
West Lirio slide.....	15,350	32,550	47,900
Maintenance.....	3,450	5,200	8,650
Pacific Entrance—			
Project No. 1.....	36,009	269,150	305,150
Maintenance.....	202,650	.....	202,650
Plant excavation:			
Dredging sand at Chame.....	2,100	.....	2,100
France Field.....	122,000	.....	122,000
Total.....	390,500	346,650	737,150

The ferry crossing at the north end of Pedro Miguel lock operated 31 days during the month. One thousand three hundred and sixty-four trips were made, and 156 Panama Canal, 56 U. S. Army, and 4,745 other vehicles, a total of 4,957, were ferried across the Canal.

MADDEN DAM PROJECT.

Studies were made of new arrangements of head works, intakes and power house to be located on the right bank of the dam site. Computations and engineering drawings of the transmission line towers were completed. Base maps for layout for dam sites 1, 5, 6, and Dike Ridge were started and the location of igneous rock quarry on Madden Road was mapped. Computations and engineering drawings of transmission towers were completed. Mapping of the 48.4 acres between the Rio Chilibrillo and Quebrada Moja Polla adjacent to the down stream side of the Madden Road, and an area of 8.0 acres on the right bank of the Rio Chilibrillo and the upper-water stage register, was completed. The precise level circuit comprising 16 saddle bench marks, in pairs, and 5 other bench marks, was finished. Seven weirs on the Madronal Ridge were completed, and weir construction in this area was finished. Four weirs were under construction in the Chilibrillo area. Earth dam investigations were continued, at Camp No. 4 a trench was dug and 6 borrow pits on the Azote Caballo-Chilibre Ridge were excavated for the purpose of securing bulk and volumetric material for analysis. Work was completed in sink hole No. 1 and one joint channel in sink hole No. 20. The total sink-hole excavation for the month amounted to 483 linear feet. Three hundred and forty-six feet of drilling of all types was performed during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on August 31, 1930, was 23,093, composed of 7,842 Americans, 2,830 of whom were men, 2,330 women, and 2,682 children; 184 Europeans, 82 of whom were men, 30 women, and 72 children; 15,067 West Indians, 4,203 of whom were men, 2,699 women, and 8,165 children. The total number of persons in quarters on August 31, 1929, was 21,993.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of August 20, 1930, with a comparison of the working force for the preceding month and for August, 1929:

	Total employees.		As of August 20, 1930.		
	August, 1929.	July, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	108	129	58	69	127
Electrical.....	333	331	158	179	337
Municipal Engineering.....	1,657	1,071	100	1,005	1,105
Lock Operation.....	955	952	241	701	942
Dredging.....	1,251	1,211	198	970	1,168
Madden Project.....	.....	296	26	262	288
Mechanical.....	1,473	1,380	502	900	1,402
Marine.....	834	788	202	564	766
Fortifications.....	334	177	23	155	178
Total.....	6,945	6,335	1,508	4,805	6,313
Supply Department:					
Quartermaster.....	2,212	2,211	220	1,866	2,086
Commissary.....	1,522	1,560	237	1,342	1,579
Cattle Industry—Plantations.....	179	96	2	92	94
Hotel Tivoli.....	109	115	8	104	112
Hotel Washington.....	105	104	9	94	103
Transportation.....	284	328	79	250	329
Total.....	4,411	4,414	555	3,748	4,303
Accounting Department.....	211	209	6	204	210
Health Department.....	1,144	1,152	296	863	1,159
Executive Department.....	837	858	525	336	861
Total.....	2,192	2,219	827	1,403	2,230
Panama Railroad Company:					
Superintendent.....	350	302	50	255	305
Transportation.....	184	186	65	124	189
Receiving and Forwarding Agency.....	1,322	1,107	87	1,219	1,306
Coaling Stations.....	279	226	43	236	279
Total.....	2,135	1,821	245	1,834	2,079
Grand total, August, 1929.....	15,683	.....	.....	.....	.....
Grand total, July, 1930.....	.....	14,789	.....	.....	.....
Grand total, August, 1930.....	.....	.....	.....	.....	14,925

Additions to the gold force on the Isthmus in August were as follows: Employed in the United States, 8; reemployed in the United States, 2; employed on the Isthmus, 9; reemployed on the Isthmus, 6; total, 25. Separations from the gold force totaled 45, as follows: Resigned, 19; discharged, 16; retired, 10; died, 0. At the end of the month there were on file 610 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 192 deaths occurred during the month of August, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (143,636 population) which is equivalent to an annual death rate of 16.04 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 26; organic diseases of the heart, 14; tuberculosis (various organs), 13; diarrhea and enteritis, 12; and nephritis (acute and chronic), 10. There were 8 deaths from cancer, 7 from apoplexy, 6 from syphilis, and 1 each from erysipelas and meningococcus meningitis. There were 17 deaths among nonresidents. These are not included in the above statistics.

There were 359 live births and 16 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 31.33. Deaths among children under 1 year of age numbered 53, giving an infant mortality rate, based on the number of live births reported, of 147.63.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 171, of whom 22 were employees (2 white and 20 colored), 11 were members of employees' families (2 white and 9 colored), 16 were Canal Zone agriculturists, 86 were other civilian nonemployees, and 36 were Army and Navy personnel. Of the 33 employees and members of employees' families, 19 were probably infected outside our sanitaried areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were two deaths from malaria among residents, both Panamanians, one of whom worked for the road commission of the Republic of Panama in the interior.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$664,672.41, of which \$595,043.17 was for the Department of Operation and Maintenance, and \$69,629.24 for other Panama Canal departments.

Cash sales on the Isthmus from stock amounted to \$42,848.41.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of July, 1930, as compared with July, 1929.

It is impossible to submit figures for the month of August at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	July, 1929.	July, 1930.
Tolls.....	\$2,259,581.87	\$2,179,389.52
Other receipts.....	366,008.43	341,693.31
Total transit revenues.....	2,625,590.30	2,521,073.83
Total transit expenses.....	1,097,936.52	1,078,660.09
Net transit revenues.....	1,527,653.78	1,442,413.74
Three per cent capital charge.....	620,105.38	625,683.92
Transit surplus.....	907,548.40	816,729.82
Business revenues.....	1,775,355.28	2,022,948.68
Business expenses.....	1,673,221.23	1,967,884.08
Net revenues.....	102,134.05	55,064.60
Three per cent capital charge.....	61,519.59	64,968.36
Business surplus.....	40,614.46	(9,903.76)
Combined revenues.....	4,400,945.58	4,544,022.53
Combined expenses.....	2,771,157.75	3,046,544.17
Net revenues.....	1,629,787.83	1,497,478.36
Three per cent capital charge.....	651,624.97	693,652.28
Combined surplus.....	948,162.86	806,826.08

Respectfully,

J. L. SCHLEY,
Acting Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 22, 1930.

No. 764.

Ecuador, Gulf of Guayaquil, buoys established. The Ecuadorian Legation in Panama is the authority for the following information relative to the establishing of two new buoys in the Gulf of Guayaquil on August 15, 1930:

1. *Puna bar:* Characteristic—Flashing white; period 3 seconds, flash 1 second, eclipse 2 seconds. Position: Lat. 2° 42' 04" S., long. 79° 55' 46" W.
2. *Moquinana:* Characteristic—Flashing white; period 3.5 seconds, flash 0.2 second, eclipse 3.3 seconds. Position: Lat. 2° 38' 41" S., long. 80° 2' 12" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 24, 1930.

No. 767.

Panama Canal, Atlantic approach, gas and whistling buoy replaced. The gas and whistling buoy, located 8½ miles from the East Breakwater light, Cristobal harbor, which was temporarily discontinued due to being struck by a ship, has been replaced. The specially constructed spar buoy marking this position has been discontinued.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending September 13, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Caldas	United Fruit Co.		September 12		230
Durazzo	Hamburg-American Line		September 7		140
Guayaquil	Panama R. R. S. S. Line		September 7		108
Heredia	United Fruit Co.		September 7		26
Santa Tecla	N. O. & S. A. S. S. Co.		September 7		8
Marquis de Comillas	Spanish Line		September 8		767
San Francisco	Hamburg-American Line		September 7		423
Ruhr	Hamburg-American Line		September 8		27
Arizona	French Line	September 7	September 7	33	58
Calamares	United Fruit Co.	September 7	September 7	15	278
Iriona	United Fruit Co.	September 7	September 8	(¹)	129
Buenaventura	Panama R. R. S. S. Line	September 7	September 8	394	121
Colombo	Italian Line	September 7	September 9	117	529
Cali	Roland Line	September 7	September 13	559	255
Colombia	Panama Mail S. S. Co.	September 8	September 9	203	477
Rapot	North German Lloyd	September 8	September 9	93	54
Tolosa	United Fruit Co.	September 8	September 10	379	2
Santa Rita	Grace Line	September 9	September 9	46	282
Champerico	Pacific Steam Navigation Co.	September 10		211	
Belray	Aluminium Line	September 10	September 10	450	(¹)
Venezuela	Panama Mail S. S. Co.	September 10	September 11	493	137
Santa Marta	United Fruit Co.	September 10	September 11	275	166
Castilla	United Fruit Co.	September 10	September 11	539	128
Pacific President	Furness, Withy & Co.	September 10	September 12	(¹)	385
Comedian	T. & J. Harrison	September 11		299	
Hercules	Royal Netherlands S. S. Co.	September 11	September 11	(¹)	304
San Rafael	States S. S. Line	September 11	September 11	38	(¹)
Triumph	Roosevelt S. S. Co., S. B.	September 11	September 12	140	(¹)
Swiftlight	C. D. Mallory & Co.	September 11	September 13	11,607	(¹)
Bogota	United Fruit Co.	September 11	September 13	5	268
Ancon	Panama R. R. S. S. Line	September 12		4,877	
Baralt	Royal Netherlands S. S. Co.	September 12		474	
Portland	Hamburg-American Line	September 12	September 12	113	146
Laguna	Pacific Steam Navigation Co.	September 12	September 12	32	59
Saramacca	United Fruit Co.	September 12	September 13	616	176
Camden	United Fruit Co.	September 12	September 13	7,417	(¹)
Eate	North German Lloyd	September 12	September 13	85	109
Iriona	United Fruit Co.	September 12	September 13	34	23
Atlantida	Standard Fruit & S. S. Co.	September 12	September 13	91	394
Lauritis Swenson	Olsen S. S. Line	September 12	September 13	1	249
Habana Maru	Osaka Shosen Kaisha	September 12	September 13	69	(¹)
Essequibo	Pacific Steam Navigation Co.	September 13		42	
Santa Barbara	Grace Line	September 13	September 13	27	117

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending September 20, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
President Fillmore	Dollar Line	September 5	September 5		2
San Jose	United Fruit Co.	September 5	September 6	606	33
Liberator	Tampa Intercean S. S. Co.	September 6	September 6	254	
Santa Tecla	N. O. & S. A. S. S. Co.	September 7	September 7	20	58
Cauca	National Navigation Co.	September 8	September 8		163
Santa Rita	Grace Line	September 9	September 9	10	45
Venezuela	Panama Mail S. S. Co.	September 9	September 10	336	1
Cambrai	U. S. Government	September 9	September 10	528	26
Colombia	Panama Mail S. S. Co.	September 9	September 10	50	9
Triumph	Roosevelt S. S. Co., S. B.	September 11	September 11	179	
Saramacca	United Fruit Co.	September 11	September 12	92	109
Laguna	Pacific Steam Navigation Co.	September 12	September 12		50
Habana Maru	Osaka Shosen Kaisha	September 12	September 12	91	
Lauritis Swenson	Fred Olsen & Co.	September 13	September 13	561	
Santa Barbara	Grace Line	September 13	September 13	1	3
Rakuyo Maru	Nippon Yusen Kaisha	September 15	September 16	231	12
Santa Inez	Grace Line	September 15	September 15	11	
Champerico	Pacific Steam Navigation Co.	September 16	September 16		1
City of San Francisco	Panama Mail S. S. Co.	September 18	September 18	29	
Sapelo	U. S. Government	September 18	September 19		12
President Wilson	Dollar Line	September 19	September 19	15	
Virginia	Panama-Pacific Line	September 19	September 19		187
San Mateo	United Fruit Co.	September 19	September 20	359	60
Aachen	North German Lloyd	September 19	September 20	336	

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, September 20, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam, water draft.	Salt water draft.	From —	For —	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.
Essequibo	13	14 30	14	6 05	14	12 52	14	14 10	British	Pacific Steam Nav. Co.	450 0	57 8	25 0	New York, N. Y.	Talcahuano, Chile	General	2 141	9 158	6 176
Barat	12	16 05	14	6 00	14	13 22	14	14 55	Dutch	Royal Neth. S. S. Co.	302 0	33 1	12 0	Cristobal, C. Z.	Guayaquil, Ecuador	General	91	1 183	742
Belenc	13	22 35	14	7 25	14	14 04	14	15 30	Swedish	Transatlantic S. S. Co.	380 0	52 0	15 7	Göteborg, Swed.	Portland, Ore.	Ballast	5 504	3 972	
Point Str.	14	6 50	14	7 30	14	15 13	14	16 30	American	Swayne & Hoyt	324 0	46 2	19 6	New Orleans, La.	San Francisco, Cal.	General	3 291	3 984	2 612
Kentuckian	14	6 10	14	7 30	14	15 00	14	16 00	American	Amer.-Hawaiian Line	414 5	53 7	20 6	Boston, Mass.	Portland, Ore.	General	3 450	7 049	4 944
Taybank	14	1 35	14	9 40	14	16 38	14	20 35	British	Bank Line, Ltd.	427 0	57 4	17 6	Baltimore, Md.	Shanghai, China	General	2 000	2 623	1 621
Otonagata	6	40	14	10 10	14	17 19	14	18 35	American	Ford Motor Co.	251 0	43 6	18 9	Chester, Pa.	Portland, Ore.	Auto. parts	2 500	2 656	1 621
Winipeg	13	22 30	14	13 05	14	19 40	14	20 53	French	French Line	472 0	59 8	21 6	Harve, France	Portland, Ore.	General	1 440	10 539	7 513
Eastern Sun	14	17 30	14	18 10	15	8 53	15	9 56	American	Sun Oil Co.	480 6	66 0	21 6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	9 607	6 680	4 916
Pacific Hemlock	14	19 50	14	20 10	15	10 35	15	11 46	American	Dimon & S. Corp.	409 7	54 2	17 6	Philadelphia, Pa.	Seattle, Wash.	General	4 326	6 680	4 916
Svejarl	14	19 15	15	6 20	15	13 33	15	16 15	Swedish	Knut Knutsen	378 7	51 3	26 6	Cristobal, C. Z.	Corral, Chile	General	7 062	5 448	3 967
Swan	15	6 05	15	6 05	15	13 04	15	15 25	American	U. S. Navy	180 0	35 6		Cristobal, C. Z.	Balboa, C. Z.	Ballast	8 044	7 611	5 497
Steel Worker	14	23 40	15	6 05	15	14 19	15	15 25	American	Isthmian S. S. Lines	424 0	56 0	26 10	Baltimore, Md.	Seattle, Wash.	Steel, general	793	6 809	4 842
Gracia	15	1 15	15	7 20	15	15 06	15	16 15	British	Donaldson Brothers	415 5	54 0	20 6	Glasgow, Scotland	Vancouver, B. C.	General	6 950	6 214	4 665
England Maru	15	3 05	15	7 25	15	15 28	15	16 45	Japanese	Kokusai Kisen Kaisha.	385 0	51 0	25 0	Tampa, Fla.	Moji, Japan	Phos. ate, cotton			
Cingalese	15	8 50	15	9 10	15	16 25	15	17 25	British	Prince Line, Ltd.	441 0	69 0	20 6	New York, N. Y.	Manila, P. I.	Grain, general	3 822	9 313	6 672
Lustrous	15	8 55	15	9 50	15	17 04	15	20 20	British	Anglo-Saxon Pet. Co.	420 5	54 0	18 0	Falmouth, England	Los Angeles, Calif.	Ballast	6 170	4 510	
Kishinoquillas	15	9 00	15	10 35	15	17 59	15	19 00	American	U. S. Tankship	399 0	54 2	17 6	New Orleans, La.	Honolulu, T. H.	Ballast	2 473	6 519	4 253
W. D. Anderson	15	8 10	15	12 55	15	19 33	15	20 48	American	Atlantic Refining Co.	391 9	51 0	21 0	Philadelphia, Pa.	Oleum, Calif.	Lubricating oil			
Reranger	15	7 05	15	14 20	15	21 15	16	00 27	Norwegian	Westfal, Larsen & Co.	398 1	54 8	16 0	Copenhagen, Den.	Vancouver, B. C.	Ballast	6 864	5 200	
Mandinga	15		15		15	8 46			American	Stand. Fruit & S. S. Co.				Cristobal, C. Z.	Gatun, C. Z.	Towing barges	8		
No. 18, C. Z.	15		15		15	8 46			American	Stand. Fruit & S. S. Co.				Cristobal, C. Z.	Gatun, C. Z.	Unknown	16		
No. 20, C. Z.	15		15		15	8 46			American	Stand. Fruit & S. S. Co.				Cristobal, C. Z.	Gatun, C. Z.	Unknown	16		
Bethore	15	15 10	16	6 30	16	14 18	16	15 25	American	Ore S. S. Corp.	550 3	72 2	21 10	Baltimore, Md.	Cruz Grande, Chile	Ballast	15 476	4 354	
Americanstar	15	12 15	16	10 10	16	16 50	16	17 55	American	Nelson Line	386 8	52 2	19 7	New York, N. Y.	Seattle, Wash.	General	3 729	5 699	4 197
San Diego	16	11 16	16	11 20	16	18 12	16	19 10	American	Pacific-Atlantic S. S. Co.	376 0	52 0	18 0	Baltimore, Md.	Tacoma, Wash.	General	3 925	5 455	3 879
Champerico	16	10 16	16	12 20	16	18 58	16	19 58	British	Pacific Steam Nav. Co.	290 0	42 0	18 0	Cristobal, C. Z.	Champerico, Guat.	General	606	2 597	1 587
Astral	16	12 45	16	13 00	16	21 15	16	22 30	American	Standard Transp. Co.	439 5	58 0	25 0	Beaumont, Texas	Los Angeles, Calif.	Batching oil	7 909	8 913	6 210
Canadan	16	14 15	16	14 25	16	22 12	16	23 20	British	Can. Nat. Steamships	399 8	52 3	19 0	Montreal, Canada	Vancouver, B. C.	General	2 674	5 885	4 073
King Bledyn	16	16 10	16	16 50	17	8 52	17	10 10	British	Dodd Thomson & Co.	412 0	55 8	13 0	Manchester, Eng.	Portland, Ore.	Ballast	31 27	6 596	4 634
Berale	16	4 50	17	6 00	17	12 38	17	14 00	Dutch	Royal Neth. S. S. Co.	400 0	58 0	21 3	Hamburg, Germany	Corral, Chile	Gen. iron, gen. l.	7 322	4 798	
Californian	16	21 10	17	6 25	17	14 15	17	14 39	American	Amer.-Hawaiian Line	449 0	59 8	18 1	Boston, Mass.	Seattle, Wash.	General	2 680	8 567	6 020
K. I.																			
Lockenbach	17	7 15	17	7 40	17	14 18	17	15 28	American	Lockenbach Line	446 0	56 0	23 0	Philadelphia, Pa.	Tacoma, Wash.	General	3 572	8 552	6 236
Tanker.									Launch.	Motor ship.									
										3 Barge.									
										3 Mine sweeper.									

¹ Launch.

² Motor ship.

³ Mine sweeper.

⁴ Tanker.

Canada	17	3	40	17	11	55	17	18	23	17	22	00	Swedish	Johnson Line	426	0	56	0	19	1	Gothenburg, Swed	Tacoma, Wash.	Paper, ore, gen.	4	834	7	476	5	485	
Oaki	17	9	50	17	14	40	17	22	20	17	23	20	British	N. Z. Shipping Co.	449	0	59	0	30	3	Avonmouth, Eng	Auckland, N. Z.	General	7	027	8	268	5	432	
Indiana	17	2	50	17	15	10	17	22	35	18	00	05	French	French Line	418	0	56	0	20	0	Havre, France	Vancouver, B. C.	General	1	313	7	157	4	936	
Oreona	17	13	20	18	6	05	18	13	20	18	14	20	British	Pacific Steam Nav. Co	511	6	62	0	24	7	Liverpool, England	Talcahuano, Chile	General	2	071	10	626	6	080	
Santa Maria	17	19	15	18	6	12	18	13	27	18	14	20	American	Grace Line	466	0	64	0	24	7	New York, N. Y.	Valparaiso, Chile	General	2	071	10	626	6	080	
San Roberto	17	23	50	18	7	30	18	14	24	18	15	30	British	Anglo-Mexican Oil Co.	407	0	52	0	19	11	London, England	Los Angeles, Calif	Ballast	6	239	6	239	6	350	
Loethkatrine	17	11	20	18	10	40	18	17	17	18	18	48	British	Royal Mail S. P. Co.	445	4	62	3	23	4	Rotterdam, Holl'd	Portland, Oreg	General	3	992	10	802	7	595	
El Cervo	18	6	30	18	11	15	18	18	15	18	19	46	American	Ore S. S. Corp	489	1	57	2	20	0	Baltimore, Md	Cruz Grande, Chile	General	3	992	10	802	7	595	
Fireore	18	12	15	18	12	30	18	19	11	20	20	30	British	Ore S. S. Corp	449	1	57	2	20	0	Baltimore, Md	Cruz Grande, Chile	Ballast	7	900	5	238	7	523	
Sapelo	18	7	35	18	14	05	18	20	57	20	14	25	American	Anglo-Panama Oil Co.	461	0	52	0	18	11	Philadelphia, Pa.	La Libertad, Ecu	Ballast	6	046	4	326	6	436	
Cities Service	18	19	45	18	20	00	19	9	34	19	10	34	American	U. S. Navy	467	0	60	0	19	0	Hampton Rds., Va.	Los Angeles, Calif	Ballast	6	046	4	326	6	436	
Petrol	18	4	50	19	6	15	19	13	45	19	13	45	American	Paine & Clooney	468	6	62	7	21	0	New York, N. Y.	Los Angeles, Calif	Ballast	9	808	7	294	9	808	
St. Michel	18	4	50	19	6	15	19	13	45	19	13	45	German	U. S. Army	448	0	58	0	23	0	New York, N. Y.	Balboa, C. Z.	General	356	7	833	5	709		
Justin	18	4	50	19	6	15	19	13	45	19	13	45	German	North German Lloyd	449	5	58	2	16	7	Bremerhaven, Ger	Vancouver, B. C.	Ballast	7	833	5	709	7	833	
President	19	4	35	19	7	10	19	14	11	19	21	48	American	Dollar Line	516	5	72	2	26	0	New York, N. Y.	Manila, P. I.	General	2	941	15	286	10	533	
Wilson	19	5	50	19	7	10	19	14	11	19	21	48	American	Panama-Pacific Line	586	4	80	3	26	0	New York, N. Y.	San Francisco, Cal	General	3	561	25	254	18	170	
Virginia	19	5	50	19	7	10	19	14	11	19	21	48	American	Panama-Pacific Line	586	4	80	3	26	0	New York, N. Y.	San Francisco, Cal	General	3	561	25	254	18	170	
Java Arrow	18	21	30	19	8	30	19	16	29	19	17	55	American	Standard Oil Co.	468	3	62	7	22	0	New York, N. Y.	Los Angeles, Calif	Ballast	10	084	7	388	10	084	
Yankee	18	21	55	19	9	40	19	17	15	19	18	20	American	Standard Transp. Co.	468	3	62	7	18	0	New York, N. Y.	Los Angeles, Calif	Ballast	9	841	6	946	9	841	
Arrow	19	9	40	19	9	55	19	18	01	19	19	00	American	The Texas Co.	416	8	56	1	21	0	Pt. Arthur, Tex.	Los Angeles, Calif	Ballast	6	945	5	032	6	945	
City of	19	10	50	19	11	05	19	18	18	20	10	25	British	Amer.-Australian Line	433	0	57	3	21	6	New York, N. Y.	Fremantle, Aust'lia	General	3	572	8	628	6	585	
Evansville	19	10	50	19	11	05	19	18	18	20	10	25	British	Amer.-Australian Line	433	0	57	3	21	6	New York, N. Y.	Fremantle, Aust'lia	General	3	572	8	628	6	585	
Cauca	19	5	15	19	13	05	19	19	50	20	12	30	Colombian	National Navigation Co.	107	0	22	0	10	6	Cristobal, C. Z.	Buenaventura, Col	General	178	233	163	163	163	163	
Aachen	19	5	15	19	13	05	19	19	50	20	12	30	Colombian	National Navigation Co.	107	0	22	0	10	6	Cristobal, C. Z.	Buenaventura, Col	General	178	233	163	163	163	163	
Steele	19	11	15	19	17	10	20	19	22	09	20	22	00	German	North German Lloyd	431	2	56	4	25	8	Bremen, Germany	Valparaiso, Chile	General	6	017	7	196	4	956
Biscaya	20	0	25	20	6	25	20	12	55	20	17	30	German	Ore S. S. Corp	550	3	72	2	24	7	Baltimore, Md	Cruz Grande, Chile	Ballast	15	551	4	297	15	551	
Svealand	20	6	05	20	7	15	20	14	28	20	20	40	Swedish	Anglo-American Oil Co.	412	0	55	0	19	0	Bowling, Glasgow	Los Angeles, Calif	Ballast	6	585	4	435	6	585	
Line L. D.	20	10	25	20	10	40	20	17	32	20	18	55	French	Ore S. S. Corp	561	0	72	2	23	0	Sparrows Pt., Md	Cruz Grande, Chile	Ballast	15	425	5	301	15	425	
Manizales	17	16	00	20	11	50	20	19	27	20	20	40	German	Louis Dreyfus & Co.	426	0	54	0	13	4	Antwerp, Belgium	Los Angeles, Calif	Ballast	7	075	5	301	7	075	
Nebraska	20	12	00	20	11	50	20	19	27	20	20	40	German	Louis Dreyfus & Co.	426	0	54	0	13	4	Antwerp, Belgium	Los Angeles, Calif	Ballast	7	075	5	301	7	075	
Port Hardy	20	12	00	20	11	50	20	19	27	20	20	40	American	McCormick S. S. Co.	409	6	54	1	18	10	San Juan, P. R.	Guayaquil, Ecuador	Gen, steel, iron	2	769	6	627	4	993	
Asbroka	20	12	15	20	12	55	20	20	25	20	21	50	British	McCormick & Dom. Line	481	0	62	0	26	0	New York, N. Y.	Seattle, Wash.	General	1	525	11	136	8	409	
Fella	20	4	25	20	14	55	20	21	30	23	05	Italian	Nav. Libera-Triestina	430	2	55	0	19	0	Trieste, Italy	Fremantle, Aust'lia	General	3	132	7	84	5	992		
Nebraska	20	14	55	20	15	15	20	22	00	20	23	10	American	Amer.-Hawaiian Line	471	2	59	0	18	3	Boston, Mass	Vancouver, B. C.	General	2	708	9	082	6	638	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Western Sun	13	21	50	14	5	47	14	13	45	14	13	45	American	Sun Oil Co.	480	6	66	0	28	4	Los Angeles, Calif	Chester, Pa.	Gasoline	13	157	9	607	6	551	
Sage Brush	13	19	40	14	6	37	14	14	15	14	14	15	American	Shepard S. Co.	409	8	54	0	23	0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	8	500	6	802	4	754	
Chiloff	13	20	00	14	7	00	14	14	15	14	14	15	American	Clele S. Co.	391	8	51	3	25	0	San Francisco, Cal.	New York, N. Y.	Dark gas oil	6	950	5	549	3	955	
Abnon	13	4	40	14	7	36	14	16	05	14	16	05	American	Redwood L.	368	8	52	2	21	0	Longview, Wash.	Mobile, Ala.	General	5	100	5	732	4	131	
Pueblo	14	7	10	14	7	32	14	16	35	14	16	35	American	Petroleum Nav. Co	340	1	49	2	21	0	Los Angeles, Calif	Norfolk, Va.	Gasoline	6	000	4	613	2	996	
Almagro	14	11	40	14	12	34	14	19	40	15	14	15	0	Pacific Steam Nav. Co	303	4	43	0	15	0	Corral, Chile	New York, N. Y.	General	870	2	826	1	770		
Jefferson Myers	14	14	15	14	15	07	14	22	35	14	22	35	American	Intercean S. S. Co	440	0	56	0	30	0	Vancouver, B. C.	Rotterdam, Holl'd	Lumber, general	9	495	8	300	6	020	
West Grana	15	8	54	15	9	53	15	18	07	19	9	40	American	U. S. Shipping Board	410	0	54	3	24	0	Abnardeen, Wash.	New York, N. Y.	Lumber	6	000	6	483	4	565	
Leeds City	15	11	30	15	12	11	15	20	15	15	22	05	British	Reardon Smith Line	400	0	54	3	25	0	Vancouver, B. C.	London, England	General	7	980	6	997	5	461	
Adolf von	15	12	50	15	14	23	15	21	50	16	5	08	German	Hamburg-American Line	409	1	53	1	23	0	Corral, Chile	Hamburg, Germany	General	6	502	7	173	5	504	
Boyer	15	12	30	15	15	15	15	22	10	16	2	18	American	Grace Line	370	0	53	2	18	0	Talcahuano, Chile	New York, N. Y.	General	2	913	6	255	4	016	
Santa Inez	15	12	30	15	15	15	15	22	10	16	2	18	American	Grace Line	370	0	53	2	18	0	Talcahuano, Chile	New York, N. Y.	General	2	913	6	255	4	016	
Motor ship.																														
Tanker.																														

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Canea ^o	15	19 05	15	19 56	16	10 50			Colombian.	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	Lumber.	90	238	163
Hanley.....	15	19 18	15	20 28	16	13 05			American.	Hanley S. S. Co.	440.0	56.0	29.0	Everett, Wash.	Newark, N. J.	General.	9,633	8,310	6,005
Pennsylvania.....	15	9 35	16	6 10	16	15 45			American.	Panama-Pacific Line	586.4	80.0	31.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	7,150	2,262	18,194
Durworth.....	15	16 20	16	6 47	16	15 45			American.	Pennsylvania Ship. Co.	435.0	56.0	26.3	San Francisco, Cal.	New York, N. Y.	Gasoline.	9,540	7,441	3,077
Polana.....	16	4 00	16	7 15	16	15 05			Norwegian.	Knut Knutsen	339.0	52.2	22.2	Talchuan, Chile	Stockholm, Sweden	General.	6,000	5,451	3,820
Alaskan.....	16	4 30	16	7 38	16	16 55			American.	Amer.-Hawaiian Line	415.0	53.7	25.5	Portland, Ore.	Boston, Mass.	General.	7,246	7,380	5,339
Paul.....																			
Lockenbach.....	16	5 20	16	8 13	16	18 25			American.	Lockenbach Line	471.0	59.2	26.2	Portland, Ore.	Boston, Mass.	Lumber, general.	8,104	9,027	6,539
San Zotico ^o	16	9 50	16	10 46	16	19 20			British.	Anglo-Mexican Oil Co.	429.0	52.0	27.0	Valparaiso, Chile	Pto. Mexico, Mex.	Ballast.		9,632	3,892
Agnewworld.....	16	17 15	17	6 36	17	13 20			American.	Richfield Oil Co. of Cal.	430.3	59.0	32.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	10,700	7,730	5,015
Ona.....	16	22 30	17	7 21	17	14 50			British.	Davies & Newman.	430.0	57.0	26.0	Los Angeles, Calif.	Davenport, Eng.	Gas oil.	9,240	7,348	3,152
Argyllshire.....	17	5 45	17	7 48	17	15 30			British.	Turnbull, Martin & Co.	526.2	61.4	26.0	Pt. Chalmers, N. Z.	Glasgow, Scotland.	General.	5,987	12,237	8,672
Mannales.....	17	9 15	17	9 55	17	16 00			German.	Roland Line	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	5,800	1,132	741
Tosca.....	17	13 30	17	14 25	17	21 20			Norwegian.	Knut Knutsen	375.8	51.4	24.0	Portland, Ore.	Fayal	Wheat.	5,985	5,083	3,930
China Arrow.....	17	13 30	17	14 34	17	21 45			American.	Standard Transp. Co.	408.3	62.7	27.0	Los Angeles, Calif.	Boston, Mass.	Gasoline.	11,229	10,084	7,388
Mittelmee ^r	17	11 45	17	14 45	17	22 30			German.	Atlantic Tank Rhederei	412.6	55.1	25.0	San Francisco, Cal.	Lands End, Eng.	Gasoline.	8,169	6,370	3,658
Spreewald ^o	17	15 30	18	6 08	18	14 30			German.	Hamburg-American Line	399.4	54.2	26.0	Valparaiso, Chile	Hamburg, Germany	Gasoline.	7,514	6,791	4,997
Swan.....	18	6 16	18	14 10					American.	U. S. Navy	187.0			Balboa, C. Z.	Cristobal, C. Z.	General.	8,351	8,874	6,558
Netheroy.....	17	17 00	18	6 46	18	15 36			British.	Royal Mail S. P. Co.	450.2	53.3	29.0	Vancouver, B. C.	Rotterdam, Holland	General.	3,005	5,905	4,175
Canadian.....	17	20 40	18	6 47	18	16 05			British.	Can. Nat. Steamships	399.9	53.2	18.0	Adelaide, Australia	Montreal, Canada	General.	113	1,270	3,120
Scottish.....	17	22 20	18	7 45	18	17 25			British.	Pacific Steam Nav. Co.	215.0	33.5	12.9	Champerco, Guat.	Cristobal, C. Z.	General.	3,005	5,905	4,175
Salvador.....	17	22 00	18	8 06	18	17 55			Dutch.	Royal Nether. S. S. Co.	346.4	48.4	22.6	Valparaiso, Chile	Rotterdam, Holland	General.	4,412	4,321	3,120
Sidney M.....	17	23 00	18	8 47	18	17 50			American.	McCormick S. S. Co.	401.4	53.2	25.6	Tacoma, Wash.	Baltimore, Md.	Lumber, piling.	7,315	7,082	5,167
Hauptmann.....	17	23 30	18	8 47	18	17 50			American.	Dumon S. S. Corp.	390.0	54.2	23.6	Tacoma, Wash.	New York, N. Y.	Lumber, general.	7,185	6,162	4,453
Willmoto ^o	17	23 30	18	9 22	18	18 30			American.	Sudden & Christenson.	410.0	54.6	18.0	San Francisco, Cal.	Baltimore, Md.	General.	2,662	6,603	4,482
Edwin.....	18	8 50	18	9 46	18	18 55			American.	Lancaster S. S. Corp.	400.7	51.2	24.0	Vancouver, B. C.	Baltimore, Md.	Lumber, general.	7,221	6,916	4,914
Christenson.....	18	18 40	18	19 25	19	11 30			American.	Richfield Oil Co.	500.0	71.2	29.6	Los Angeles, Calif.	New York, N. Y.	Gasoline.	17,000	10,228	6,352
Tamabaha.....	18	18 00	19	5 57	19	14 55			American.	Shaw, Savill & Albion.	500.3	62.6	23.6	Auckland, N. Z.	London, England.	Frozen meats.	3,461	12,367	7,646
Corinth.....	18	21 00	19	6 49	19	14 30			British.	W. Runciman & Co.	375.0	52.6	25.0	San Francisco, Cal.	Leith, Scotland.	Barley.	2,273	4,393	2,049
Glenmore.....	19	00 20	19	7 06	19	16 25			British.	W. Runciman & Co.	450.3	57.8	24.0	Talchuan, Chile	New York, N. Y.	General.	2,684	8,480	5,174
Ebro.....	19	2 30	19	8 21	19	16 00			British.	Pacific Steam Nav. Co.	450.3	57.8	24.0	Talchuan, Chile	New York, N. Y.	General.	4,946	4,995	3,659
San Domingo.....	19	00 35	19	8 36	19	17 10			American.	Staces S. S. Corp.	376.4	52.3	24.0	Seattle, Wash.	Baltimore, Md.	General.	4,946	4,995	3,659
Abraham.....	19	3 00	19	9 21	19	18 30			Norwegian.	Fred Olsen & Co.	435.9	56.2	26.6	Vancouver, B. C.	Oslo, Norway	Beans, coffee.	7,609	5,784	3,603
Lincdon.....	19	5 45	19	9 39	19	18 55			American.	N. O. & A. S. S. Co.	435.6	50.2	26.2	San Antonio, Chile	New York, N. Y.	Fuel distillate.	10,136	3,552	3,588
Nosa King.....	19	14 00	19	14 50	19	21 35			American.	Standard Transp. Co.	434.3	57.7	25.0	Seattle, Wash.	Boston, Mass.	General.	14	Wheat, fruit, and general.	
Arto.....	19	14 25	19	15 20	19	22 19			American.	Amer.-Hawaiian Line.	434.3								
Georgian.....	19	14 25	19	15 20	19	22 19			American.										

11 For orders.

12 Coffee, platinum, and cylinders.

13 Nitrates, cotton, ore, and bark.

14 Wheat, fruit, and general.

15 Motor ship.

16 Tanker.

Bautia	19	19.00	19	19.55	20	11.45	20	11.45	Norwegian.	William Hansen.	270.1	33.1	18.7	Santa Rosa, Peru	Wilmington, Del.	Guario	2,450	1,657	944
Tuculaoosa	19	22.10	20	6.01	20	14.00	20	14.00	American.	Isthmian S. Co.	424.2	56.2	26.0	New Westminster.	Avonmouth, Eng.	General.	7,749	5,687	3,450
Gen. W. G.																			
Gen. G.																			
San Vicente.	20	14.10	20	14.55	20	22.00	20	22.00	American.	U. S. Army.	98.0	22.0		Balboa, C. Z.	Oristobal, C. Z.				
San Francisco.	20	14.40	20	15.23	20	21.25	20	22.00	American.	Quaker Liner.	410.5	54.3	26.0	Seattle, Wash.	Philadelphia, Pa.	Junber, general.	6,982	6,572	4,900
San Pedro.	20	14.40	20	15.23	20	21.25	20	22.00	American.	Roosevelt S. Co., S.B.	395.5	55.0	24.0	Whyalla, Australia.	New York, N. Y.	General.	6,218	7,341	5,247

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 14.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.	September 14	No. 945-M ¹⁵	Pan American-Grace Airways.	Talara via wayports.
September 15.	Guadeloupe.	French Line	St. Nazaire via wayp'ts.	September 14	No. 9664 ¹⁵	Pan American Airways.	San Salvador and wayp'ts.
September 15.	August Thysen.	Aluminum Line	Kingston, Jamaica.	September 14	No. 142-M ¹⁵	Pan American Airways.	Miami via wayports.
September 15.	Cordoba C-40 ¹⁵	Seacliff Airplane Co.	Barranquilla & wayports.	September 14	Tolosa.	United Fruit Co.	New York via Habana.
September 15.	Pastores.	United Fruit Co.	New York via Habana.	September 14	Cartago.	United Fruit Co.	New Orleans and wayp'ts.
September 16.	No. 9670 ¹⁵	Pan American Airways.	San Salvador and wayp'ts	September 15	Antcon.	Panama R. R. S. S. Line.	Lands End via Haiti.
September 16.	Castilla.	United Fruit Co.	Cartagena, Colombia.	September 15	Comedion.	T. & J. Harrison.	New York via England.
September 17.	Metapan.	United Fruit Co.	New York via Kingston.	September 16	August Thysen.	Aluminum Line.	Ausderlund, Holland.
September 17.	Tela.	United Fruit Co.	New Orleans, La.	September 16	No. 9685 ¹⁵	Pan American Airways.	San Salvador and wayp'ts.
September 17.	Crynsen.	Royal Netherlands S. S. Co.	Amsterdam and wayp'ts.	September 17	No. 9776 ¹⁵	Pan American Airways.	Miami via wayports.
September 16.	No. 945-M ¹⁵ .	Pan American-Grace Airways.	Talara via wayports.	September 17	Guadeloupe.	French Line.	Havre via wayports.
September 17.	No. 9664 ¹⁵ .	Pan American Airways.	San Salvador and wayp'ts.	September 17	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
September 17.	No. 9197 ¹⁵ .	Pan American Airways.	Miami via wayports.	September 17	Anachuca ¹⁶ .	United Fruit Co.	Colon, Rep. of Panama.
September 17.	Anachuca ¹⁶ .	United Fruit Co.	Colon, Rep. of Panama.	September 17	Inapachuca ¹⁶	A. Tagarapulos.	Colon, Rep. of Panama.
September 17.	Inapachuca ¹⁶ .	A. Tagarapulos.	Colon, Rep. of Panama.	September 17	Anneta I. ¹⁶	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
September 17.	Anneta I. ¹⁶ .	Gough Brothers	Port Limon, Costa Rica.	September 17	Crynsen.	Pan American-Grace Airways.	Talara via wayports.
September 18.	Pasajero ¹⁷ .	Royal Netherlands S. S. Co.	New York via wayp'ts.	September 18	No. 300-N ¹⁵	Pan American Airways.	Pto. Cabella and wayp'ts.
September 18.	Crynsen.	Standard Fruit & S. S. Co.	New Orleans via Habana.	September 18	No. 144-M ¹⁵	United Fruit Co.	New York via wayp'ts.
September 19.	Anapala.	Hamburg-American Line	Tampico via wayports.	September 18	Metapan.	United Fruit Co.	Puerto Colombia.
September 20.	Grnewald.	G. I. Bryan.	Colon, Rep. of Panama.	September 19	Tela.	Pan American Airways.	San Salvador and wayp'ts.
September 20.	Pearl Marie ¹⁶ .	Diez & Garcia	Colon, Rep. of Panama.	September 19	Bridgetown.	Colombian S. S. Line.	New York via wayports.
September 20.	Nueva Espana ¹⁶ .	Pan American Airways.	Pto. Cabella and wayp'ts.	September 19	Cordoba C-40 ¹⁵	Seacliff Airplane Co.	Barranquilla and wayp'ts.
September 20.	No. 144-M ¹⁵ .	Pan American Airways.	Miami via wayports.	September 20	Castilla.	United Fruit Co.	New Orleans and wayp'ts.
September 20.	No. 142-M ¹⁵ .	Pan American Airways.	San Salvador and wayp'ts.	September 20	Anapala.	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
September 20.	No. 9685 ¹⁵ .	Pan American Airways.	Talara via wayports.	September 20	Pearl Marie ¹⁷ .	Diez & Garcia.	Colon, Rep. of Panama.
September 20.	No. 300-N ¹⁵ .	Pan American-Grace Airways.		September 21	Crynsen.	Royal Netherlands S. S. Co.	Bluefields, Nicaragua.
September 20.				September 21	Pasajero ¹⁷ .	Gough Brothers	Ausderlund and wayp'ts.
September 20.				September 21			Port Limon, Costa Rica.

PORT OF BALBOA.

[illegible]

* Other than ships passing through the Canal.

(Continued on page 116, column 2.)

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., September 24, 1930.

No. 768.

West Indies and Central America, information on various lights. The following is quoted from the Hydrographic Bulletin, issued by the Hydrographic Office, Navy Department at Washington, D. C., dated September 17, 1930:

1. *Nicaragua, Grande River light reported extinguished.* The Commanding Officer of the U. S. S. *Ashville* reports that on August 26, 1930, while anchored off Rio Grande, Nicaragua, it was observed that Rio Grande light was not lighted. Approximate position: Latitude $12^{\circ} 04' 00''$ N., longitude $83^{\circ} 31' 30''$ W.

2. *Curacao Island, Caracas Bay, Lij Hoek, light established.* Information has been obtained through the State Department that on August 13, 1930, an unwatched flashing red acetylene light, showing one flash every 3 seconds; flash 0.3 second, eclipse 2.7 seconds, was established on Lij Hoek, western point of Caracas Bay. The light is exhibited 42 feet above high water, from a black wooden structure, and is visible $3\frac{1}{2}$ miles. Approximate position: Latitude $12^{\circ} 04' 19''$ N., longitude $68^{\circ} 52' 29''$ W.

3. *Venezuela, Tortuga Island, amended position of light.* The unwatched flashing white light every 9 seconds, flash 3 seconds, eclipse 6 seconds, elevated 59 feet and visible 13 miles, heretofore shown on Ranches Point, is located on Delgada Point, about 5 miles further eastward. Approximate position: Latitude $10^{\circ} 58' 14''$ N., longitude $65^{\circ} 14' 14''$ W.

J. L. SCHLEY,
Acting Governor.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at $14\frac{1}{2}$ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective August 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.26
Gasoline, motor grade	Gal.	.135
Metal, yellow	Lb.	.29
Oakum, Navy, spun	Lb.	.15
Oakum, Navy, unspun	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.41
Oil, kerosene, in drums	Gal.	.10
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.13
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.12
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.14
Waste, cotton, white	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 15 years of operation.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 113.

PORT OF BALBOA.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Vessel.	Line.	For—
September 19	San Mateo	United Fruit Co.	Panama Mail S. S. Co.		Buenaventura, Colombia.
September 19	Nueva Panama ²⁰	Panama Bay, R. P.	United Fruit Co.		San Francisco, Calif.
September 19	Real ²¹	Panama Bay, R. P.	Haus Elliot		Panama Bay, R. P.
September 19	La Union ²¹	Panama Bay, R. P.	Haus Elliot		Panama Bay, R. P.
September 19	Dos Hermanos ²¹	Panama Bay, R. P.	A. Valdez		Panama Bay, R. P.
			A. Valdez		Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁰ Motor ship. ²¹ Motor schooner.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., October 1, 1930.

No. 9.

Canal Traffic During September.

During the month of September, 1930, 458 commercial vessels and 15 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,057,103.58, and on the launches \$173.67, or a total tolls collection of \$2,057,277.25.

The daily average of commercial vessels was 15.26, and the average tolls collection was \$68,570.12, as compared with an average of 15 transits and \$67,104.21 in tolls for the previous month, and an average of 17.43 transits and \$73,392.98 in tolls for September, 1929. The average amount of tolls paid by each of the commercial transits was \$4,491.49, as compared with \$4,473.61 for the month of August, 1930.

The number of commercial transits for the past month was the lowest since June, 1927, when 455 vessels were passed through the Canal. The commercial tolls collected in September, 1930, were the lowest since June, 1928, when \$2,016,211.09 was assessed against 481 vessels. Although the number of transits and tolls collected for September, 1930, were lower than in the previous month, the daily averages in September were slightly higher.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 9 months of the calendar years 1929 and 1928:

Month.	Totals for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
Total, first 9 months of calendar year, 1930.....	4,394	19,566,101.67	16.10	71,670.70
Total, first 9 months of calendar year, 1929.....	4,819	20,552,891.31	17.65	75,285.31
Total, first 9 months of calendar year, 1928.....	4,671	19,432,050.24	17.05	70,919.89

As compared with the first 9 months of the calendar year 1929, the corresponding period this year has had 425 fewer transits and \$986,789.64 less tolls.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, September 27, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Port Nicholson.	20	13.45	21	6.10	21	13.25	21	14.41	British.	Com'th & Dom. Line.	480.0	62.0	29.4	London, England.	Nelson, N. Z.	General.	7,365	10,821	8,043
San Clemente.	20	17.35	21	7.10	21	14.09	21	15.15	American.	Quaker Line.	410.0	54.4	18.7	Philadelphia, Pa.	Tacoma, Wash.	General.	3,892	6,476	4,032
Lake Gorin.	21	11.40	21	11.45	21	18.15	22	00.27	Japanese.	Ford Motor Co.	250.0	43.6	18.10	Chester, Pa.	Long Beach, Calif.	Auto. parts.	2,341	2,692	1,808
Takaka Maru.	21	12.15	21	12.25	21	19.35	21	21.00	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	25.0	Baltimore, Md.	Kobe, Japan.	General.	7,500	7,989	5,856
Sunol 1.	21	12.45	21	13.50	21	20.51	21	22.24	American.	San Oil Co.	480.6	66.0	21.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	.....	9,619	6,456
Lady May 1.	21	12.45	21	13.50	21	20.51	21	22.24	American.	G. M. Downer.	480.6	66.0	21.0	Chester, Pa.	Los Angeles, Calif.	Ballast.	.....	9,619	6,456
Henry S. Grove.	21	15.40	21	19.50	22	8.53	22	9.50	American.	Nautilus S. Corp.	404.6	54.0	27.0	Cristobal, C. Z.	Catatan, C. Z.	Ballast.	.....	5	5
Schwarzwald.	21	19.40	22	6.00	22	13.35	22	16.00	German.	Hamburg-American Line.	399.0	54.0	21.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	7,645	6,755	4,688
Hilda.	21	19.40	22	6.00	22	13.35	22	16.00	German.	Hamburg-American Line.	399.0	54.0	21.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	7,645	6,755	4,688
Knudsen 1.	22	00.50	22	7.05	22	13.54	22	15.54	Norwegian.	Ostlandske Pet. Co.	470.0	64.0	20.0	Hull, England.	Talara, Peru.	Ballast.	.....	9,474	6,489
Hazel Branch.	22	3.00	22	7.30	22	14.10	22	16.30	British.	F. & W. Ritson.	400.0	51.2	19.0	Liverpool, England.	Valparaiso, Chile.	General.	3,000	5,208	3,578
Chilcoop.	22	5.00	22	7.50	22	15.30	22	16.30	American.	Chile S. S. Co.	411.5	54.1	19.0	New York, N. Y.	Chamaral, Chile.	General.	1,994	6,609	4,973
Ruby Castle 1.	22	10.00	22	10.10	22	16.59	22	18.18	British.	Barber S. S. Line.	400.0	52.3	23.6	New York, N. Y.	Hongkong, China.	General.	5,148	6,805	5,077
Calgarolite 1.	22	00.05	22	11.50	22	18.05	22	22.45	British.	Imperial Oil Co.	521.5	70.4	24.0	Halifax, N. S.	Talara, Peru.	Ballast.	.....	12,339	7,717
Nosa Prince.	22	9.30	22	13.40	22	20.20	22	21.20	American.	N. O. & S. A. S. Co.	324.0	46.2	18.11	New Orleans, La.	Talcahuano, Chile.	General.	2,165	3,913	2,570
Gen. G. W.	22	9.30	22	13.40	22	20.20	22	21.20	American.	N. O. & S. A. S. Co.	324.0	46.2	18.11	New Orleans, La.	Talcahuano, Chile.	General.	2,165	3,913	2,570
Getty 1.	22	15.35	23	6.50	23	10.00	23	12.43	American.	U. S. Army.	89.0	22.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Towing barge.	1,508	5,957	4,325
Santa Elisa.	22	15.35	23	6.50	23	10.00	23	12.43	American.	Grace Line.	360.3	51.7	22.0	New York, N. Y.	Talcahuano, Chile.	General.	1,720	.....	.....
Artemisa.	22	13.30	23	6.05	23	13.20	24	3.07	German.	Hamburg-American Line.	360.0	48.0	17.6	Hamburg, Germany.	Champerico, Guat.	General.	2,581	3,984	2,628
Chetopa.	23	2.00	23	7.05	23	13.30	23	16.10	American.	Nelson Line.	324.0	46.0	18.6	New York, N. Y.	Seattle, Wash.	General.	489	7,979	5,916
Pacific Trader 1.	23	8.15	23	8.30	23	15.10	23	19.40	British.	Furness, Withy & Co.	420.0	53.0	17.2	Glasgow, Scotland.	Vancouver, B. C.	General.	.....	.....	.....
Rio de Janeiro.	23	6.20	23	8.35	23	16.05	23	17.10	Japanese.	Ozaka Shosen Kaisha.	401.0	62.0	23.0	Buenos Aires, Arg.	Kobe, Japan.	Cotton, hide, etc.	3,709	.....	.....
Maru 1.	23	9.40	23	9.50	23	16.54	23	18.23	British.	Reardon Smith Line.	401.6	54.3	24.0	Tampa, Fla.	Shanghai, China.	General.	7,293	6,621	4,916
Slegness.	23	10.05	23	10.20	23	17.21	23	18.23	American.	Shell Eastern Pet. Prod.	435.6	56.0	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.	.....	7,426	5,073
Antietam.	23	10.25	23	12.00	23	18.35	24	13.10	American.	Panama Mail S. Co.	389.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General.	1,540	5,926	4,178
Fenador.	23	10.25	23	12.00	23	18.35	24	13.10	American.	Panama Mail S. Co.	389.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General.	1,540	5,926	4,178
Liveza.	23	10.25	23	12.00	23	18.35	24	13.10	American.	Panama Mail S. Co.	389.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General.	1,540	5,926	4,178
Elstree.	23	10.25	23	12.00	23	18.35	24	13.10	American.	Panama Mail S. Co.	389.6	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General.	1,540	5,926	4,178
Grange.	23	12.20	23	14.20	23	21.47	24	7.50	British.	Furness, Withy & Co.	420.0	53.5	16.0	Liverpool, England.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Pacific Pine.	23	14.45	23	15.00	23	23.00	24	00.05	American.	Dimon S. S. Corp.	410.5	54.3	18.0	Philadelphia, Pa.	Tacoma, Wash.	General.	2,639	6,583	4,808
Avala.	23	19.00	24	6.10	24	13.00	24	14.09	Yugoslav.	Baburizza & Co.	425.0	58.0	16.0	O ran, Algeria.	Iquique, Chile.	Ballast.	.....	.....	.....
Edward.	24	6.50	24	7.10	24	13.50	24	14.50	American.	Luckenbach Line.	436.6	57.0	21.3	Boston, Mass.	Seattle, Wash.	General.	3,272	8,543	6,427
Panama.	24	8.55	24	9.05	24	15.31	24	17.00	American.	Amer-Hawaiian Line.	407.7	57.7	19.0	Boston, Mass.	Tacoma, Wash.	General.	2,998	7,098	5,065
Stromstad 1.	24	9.15	24	10.00	24	16.40	24	19.50	Norwegian.	Fern Line.	376.6	53.8	19.6	Houston, Texas.	Japan.	Cotton.	4,417	6,256	4,663
Nicoline.	24	11.10	24	11.30	24	18.10	24	19.25	Danish.	Isbrandtsen Moller Co.	374.0	52.0	22.8	Baltimore, Md.	Saigon, China.	General.	5,200	5,928	4,483
Maersk 1.	24	00.45	24	12.05	24	19.33	24	20.35	British.	Pacific Steam Nav. Co.	261.0	46.0	16.0	New York, N. Y.	Callao, Peru.	General.	833	2,746	1,626

* Tug.

1 Launch.

2 Motor ship.

3 Tanker.

[illegible]

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

s Barge.

1 Tanker.

6 Launch.

Paul Shoup ¹ ...	21	4.06	21	6.54	21	14.10	21	14.10	American...	Associated Oil Co.	424.4	58.2	27.0	San Francisco, Cal.	New York, N. Y.	Gasoline.....	10,242	7,333	5,182
Miss Coco Solo ²	21		21		21				American...	Jules de Prefet.....	16.3	4.0		Balboa, C. Z.....	Cristobal, C. Z.....	Ballast.....	1	1	
Vancouver																			
Maru	21	6.30	21	7.40	21	15.15	21	16.15	Japanese...	Kokusai Kisen Kaisha...	385.0	51.0	26.0	Portland, Ore....	Dublin, Ireland....	Wheat.....	7,870	5,919	4,389

¹ Tanker.

² Launch.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	Gross.	Net.
Fernbank ?	21	1.40	21	10.45	21	18.10	21	18.45	Norwegian.	Fearnley & Eger	382.7	53.4	24.0	24.0	Whyalla, Australia.	Baltimore, Md.	Iron ore.	6,982	6,112	4,265
West Ira	21	11.50	21	12.40	21	19.30	21	19.30	American.	McCormick S. Co.	410.5	54.2	25.0	25.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	8,290	6,753	5,111
Cadiz ?	20	21.15	21	13.40	21	21.25	21	21.25	Colombian.	International Navigation Co.	116.0	51.1	9.6	9.6	Risical, C. Z.	General.	General.	10,123	8,158	5,674
Atago Maru ?	21	8.45	21	14.45	22	12.00	22	12.00	Japanese.	Charles Yusen Kaisha.	440.2	57.0	28.0	28.0	Manila, P. I.	New York, N. Y.	Rice, general.	4,073	3,984	2,628
Marsadak	21	16.54	21	17.51	22	10.55	22	10.55	American.	Nippon Nelson & Co.	324.0	46.2	24.0	24.0	Tacoma, Wash.	Baltimore, Md.	Lumber, general.	4,073	3,984	2,628
Mura.	22	9.15	22	10.17	22	17.30	22	17.30	German.	Roland Line.	449.2	58.1	25.0	25.0	Hamburg, Germany	General.	General.	8,277	7,756	5,378
Leja	20	21.00	22	11.46	22	18.15	22	18.15	American.	Lukenbach Line.	425.0	53.8	28.0	28.0	Seattle, Wash.	Mobile, Ala.	(*)	6,762	7,917	5,295
Lukenbach.	22	8.15	22	19.55	22	19.55	22	19.55	American.	Amer-Chaban S. Co.	351.0	43.0	23.0	23.0	Port Allen, T. H.	Philadelphia, Pa.	Raw sugar.	3,280	2,823	2,740
Santa Veronica.	22	14.25	22	15.05	22	22.45	22	22.45	Danish.	A. P. Moller.	302.2	44.2	15.0	15.0	Holbo, P. I.	New York, N. Y.	Sugar.	2,000	3,212	2,180
Leise Maersk ?	22	6.50	23	6.15	23	13.24	23	13.24	American.	U. S. Army.	448.0	58.0	22.0	22.0	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	5,737	5,760	3,866
Somme	22	4.00	23	7.07	23	15.15	23	15.15	British.	F. & W. Ritson.	398.0	53.9	22.0	22.0	Sorral, Chile.	Liverpool, England	General.	1,490	1,308	5,850
Pear Branch.	23	4.17	23	7.28	24	8.50	24	11.00	American.	U. S. Army.	448.0	58.0	25.0	25.0	Balboa, C. Z.	New York, N. Y.	War Dept. gen.	1,490	1,308	5,850
St. Michel	23	4.17	23	7.28	24	8.50	24	11.00	American.	Rosevelt S. Co., S.B.	456.1	56.0	25.0	25.0	Manila, P. I.	New York, N. Y.	Molasses, gen.	1,490	1,308	5,850
Courageous ?	23	7.40	23	9.06	23	18.20	23	18.20	American.	Calmor S. Corp.	399.7	56.2	25.0	25.0	Portland, Oreg.	Baltimore, Md.	Lumber.	7,571	7,381	5,505
Alamar	23	8.40	23	9.37	23	16.50	23	22.40	British.	N. Z. Shipping Co.	485.0	62.3	24.4	24.4	Wellington, N. Z.	London, England.	Frozen, general.	3,706	11,911	8,945
Pacific	23	9.15	23	10.06	23	19.05	23	19.05	British.	Furness, Withy & Co.	435.9	60.7	27.5	27.5	Vancouver, B. C.	Glasgow, Scotland.	General.	4,479	9,633	6,998
Exporter ?	23	9.45	23	10.51	23	19.30	23	19.30	American.	Amer-Hawalan Line.	472.3	57.2	27.4	27.4	Portland, Oreg.	Boston, Mass.	General.	9,667	9,258	6,944
Mexican.	23	12.45	23	13.40	23	20.40	24	00.05	German.	North German Lloyd.	432.3	59.1	26.3	26.3	Vancouver, B. C.	Hamburg, Germany	General.	7,856	8,454	6,344
Horace	23	14.05	23	14.43	23	21.50	23	21.50	American.	Lukenbach Line.	445.0	58.0	28.0	28.0	Portland, Oreg.	Boston, Mass.	General.	8,867	8,609	6,363
Washington ?	23	16.15	23	17.00	24	10.40	24	16.12	French.	French Line.	493.1	61.2	27.0	27.0	Vancouver, B. C.	Avonmouth, Eng.	General.	8,008	10,332	7,475
Queens.	23	18.30	23	19.40	24	11.35	24	17.35	British.	Howard Lemmings, Ltd.	451.9	59.2	26.0	26.0	Talca, Chile	Avonmouth, Eng.	Nitrate.	7,370	5,138	3,673
Sandar ?	23	19.00	24	6.06	24	13.20	24	13.20	Norwegian.	Raidon Verik Sandford	451.9	59.2	26.0	26.0	Los Angeles, Calif.	Azores	General.	10,138	7,044	5,408
Triglav	24	6.10	24	7.06	24	15.00	24	15.00	Yugoslav.	Vogoslavski Lloyd.	425.0	51.6	22.0	22.0	Sacra Colosa, Chile	London, Eng.	Nitrate of soda.	9,000	7,731	5,759
Guatemala.	24	7.35	24	9.19	24	15.50	24	15.50	American.	Panama Mail S. Co.	360.2	51.6	22.0	22.0	San Francisco, Cal.	New York, N. Y.	General.	1,557	5,776	4,081
Pengo	24	11.00	24	11.46	24	18.55	24	18.55	German.	Hamburg-American Line.	227.2	34.4	24.0	24.0	Guaymas, Mexico	Christiansburg, C. Z.	General.	1,807	1,572	1,011
Tidewater ?	25	1.40	25	6.07	25	14.45	25	14.45	American.	Tidewater Oil Co.	480.6	66.0	28.0	28.0	San Francisco, Cal.	New York, N. Y.	Gasoline.	13,130	7,734	6,340
Ness Queen.	25	6.30	25	7.12	25	14.55	25	14.55	American.	N. O. & S. A. S. Co.	324.0	46.2	24.0	24.0	Valparaiso, Chile.	New Orleans, La.	Nitrate of soda.	4,810	3,981	2,600
Nitrois.	25	2.30	25	7.36	25	18.00	25	18.00	German.	Hamburg-American Line.	410.9	50.7	26.0	26.0	Valparaiso, Chile.	Hamburg, Germany	General.	5,902	6,652	4,704
Svalder ?	25	5.30	25	8.06	25	18.00	25	18.00	Norwegian.	Stensens & Waage.	408.3	53.3	27.0	27.0	Los Angeles, Calif.	Avonmouth, Eng.	General.	8,143	6,466	4,336
Vird ?	25	9.35	25	10.37	25	19.10	25	19.10	Norwegian.	Anglo-Saxon Pet. Co.	420.3	57.2	26.0	26.0	Los Angeles, Calif.	Avonmouth, Eng.	Gasoline.	9,231	7,442	5,132
S-12 ?	25	12.15	25	11.12	25	20.20	25	20.20	British.	U. S. Navy.	231.0	50.0	26.0	26.0	Balboa, C. Z.	Christiansburg, C. Z.	General.	8,201	7,216	4,912
La Paz ?	25	11.30	25	12.15	25	20.20	25	20.20	British.	Pacific Steam Nav. Co.	406.3	54.2	26.3	26.3	Talcahuano, Chile.	Liverpool, England	General.	8,800	10,716	7,674
Port Gibson ?	25	18.00	26	6.00	26	10.55	26	10.55	British.	The Texas & Dom. Line.	477.2	63.0	29.0	29.0	Sydney, Australia.	London, England.	General.	7,488	6,925	5,014
New Jersey ?	25	11.30	26	6.00	26	15.45	26	15.45	American.	Com Fib & Dom. Line.	416.8	56.1	29.0	29.0	Los Angeles, Calif.	Houston, Texas	General.	7,488	6,925	5,014
Verano	25	14.00	26	6.57	26	14.58	27	8.30	American.	United Fruit Co.	336.7	51.9	27.0	27.0	San Francisco, Cal.	Christiansburg, C. Z.	General.	7,450	3,667	2,330
Sernon City.	25	17.10	26	7.08	26	18.50	26	19.50	British.	Sir W. R. Smith & Sons	400.5	54.2	26.0	26.0	Victoria, B. C.	Manchester, Eng.	General.	7,557	6,979	5,389

* Submarine.

* Coffee, ivory nuts, and hides.

* Canned fruit, salmon, and general.

* For orders.

* Motor ship.

* Tanker.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 21	Panama	United Fruit Co.	New Orleans and Habana.	September 21	No. 9664 ¹²	Pan American Airways.	San Salvador and waypts.
September 21	Pastores	United Fruit Co.	Porto Limon, Costa Rica.	September 21	Crutwald	Hamburg-American Line.	Cartagena, Colombia.
September 22	Tela	United Fruit Co.	Barranquilla, Colombia.	September 21	No. 9137 ¹²	Pan American Airways.	Miami via waypts.
September 22	Darien C-35 ¹²	United Fruit Co.	New York via Habana.	September 21	Pastores	United Fruit Co.	New York via Habana.
September 23	Ulua	United Fruit Co.	San Salvador and waypts.	September 22	Panama	United Fruit Co.	New Orleans and waypts.
September 23	No. 9670 ¹²	Pan American Airways.	Talara via waypts.	September 22	Tala	United Fruit Co.	Porto Limon via Bogota.
September 23	No. 945-M ¹²	Elders & Fyffes, Ltd.	Avonmouth via waypts.	September 24	Ulua	Elders & Fyffes, Ltd.	Porto Limon, Costa Rica.
September 24	Cristobal	Panama R. S. S. Line.	New York via Kingston.	September 24	Cavina	Pan American Airways.	Avonmouth via waypts.
September 24	Svaola	United Fruit Co.	New Orleans, La.	September 24	No. 9085 ¹²	Pan American Airways.	San Salvador and waypts.
September 24	Escupe Fuego ¹³	Papi & Connolly	Bluefields, Nicaragua.	September 25	No. 142-M ¹²	Pan American Airways.	Pto. Cabello and waypts.
September 24	No. 9664 ¹²	Pan American Airways.	Miami via waypts.	September 25	No. 300-N ¹²	Pan American Airways.	Talara via waypts.
September 25	No. 9776 ¹²	Hamburg-American Line.	Liverpool via waypts.	September 25	No. 144-M ¹²	Pan American Airways.	Pto. Cabello and waypts.
September 25	Davisan	Leyland S. S. Line.	New York via waypts.	September 25	Svaola	United Fruit Co.	New York via waypts.
September 25	Bolivar	Aluminum Line.	Houston via waypts.	September 25	Irona	Hamburg-American Line.	Tampico and waypts.
September 25	Sparholm	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.	September 26	No. 9670 ¹²	Pan American Airways.	Puerto Colombia.
September 26	Wauita	Standard Fruit & S. S. Co.	New Orleans and Habana.	September 26	Sparholm	Aluminum Line.	Puerto Colombia.
September 26	Atlanta	United Fruit Co.	Boca, R. P.	September 26	Bolivar	Colombian S. S. Line.	New York via waypts.
September 26	Tela	United Fruit Co.		September 26	Darien C-35 ¹²	Standard Fruit & S. S. Co.	Barranquilla and waypts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
September 21	Panama	United Fruit Co.	New Orleans and Habana.	September 21	No. 9664 ¹²	Pan American Airways.	San Salvador and waypts.
September 21	Pastores	United Fruit Co.	Porto Limon, Costa Rica.	September 21	Crutwald	Hamburg-American Line.	Cartagena, Colombia.
September 22	Tela	United Fruit Co.	Barranquilla, Colombia.	September 21	No. 9137 ¹²	Pan American Airways.	Miami via waypts.
September 22	Darien C-35 ¹²	United Fruit Co.	New York via Habana.	September 21	Pastores	United Fruit Co.	New York via Habana.
September 23	Ulua	United Fruit Co.	San Salvador and waypts.	September 22	Panama	United Fruit Co.	New Orleans and waypts.
September 23	No. 9670 ¹²	Pan American Airways.	Talara via waypts.	September 22	Tala	United Fruit Co.	Porto Limon via Bogota.
September 23	No. 945-M ¹²	Elders & Fyffes, Ltd.	Avonmouth via waypts.	September 24	Ulua	Elders & Fyffes, Ltd.	Porto Limon, Costa Rica.
September 24	Cristobal	Panama R. S. S. Line.	New York via Kingston.	September 24	Cavina	Pan American Airways.	Avonmouth via waypts.
September 24	Svaola	United Fruit Co.	New Orleans, La.	September 24	No. 9085 ¹²	Pan American Airways.	San Salvador and waypts.
September 24	Escupe Fuego ¹³	Papi & Connolly	Bluefields, Nicaragua.	September 25	No. 142-M ¹²	Pan American Airways.	Pto. Cabello and waypts.
September 24	No. 9664 ¹²	Pan American Airways.	Miami via waypts.	September 25	No. 300-N ¹²	Pan American Airways.	Talara via waypts.
September 25	No. 9776 ¹²	Hamburg-American Line.	Liverpool via waypts.	September 25	No. 144-M ¹²	Pan American Airways.	Pto. Cabello and waypts.
September 25	Davisan	Leyland S. S. Line.	New York via waypts.	September 25	Svaola	United Fruit Co.	New York via waypts.
September 25	Bolivar	Aluminum Line.	Houston via waypts.	September 25	Irona	Hamburg-American Line.	Tampico and waypts.
September 25	Sparholm	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.	September 26	No. 9670 ¹²	Pan American Airways.	Puerto Colombia.
September 26	Wauita	Standard Fruit & S. S. Co.	New Orleans and Habana.	September 26	Sparholm	Aluminum Line.	Puerto Colombia.
September 26	Atlanta	United Fruit Co.	Boca, R. P.	September 26	Bolivar	Colombian S. S. Line.	New York via waypts.
September 26	Tela	United Fruit Co.		September 26	Darien C-35 ¹²	Standard Fruit & S. S. Co.	Barranquilla and waypts.

* Other than ships passing through the Canal.

¹² Air mail carrier.¹³ Motor schooner.¹⁴ Motor boat.

(Continued on page 124, column 2.)

Transit of "Rio de Janeiro Maru."

The new passenger and freight motor ship *Rio de Janeiro Maru*, of the Osaka Shosen Kaisha, transited the Canal from the Atlantic to the Pacific on September 25, 1930, on her maiden voyage in the around-the-world service of the company. Of 9,539 gross tons and capable of a speed of 18 knots, the vessel is the second of 2 new motor ships recently placed in service, having been preceded by a sister ship, the *Buenos Aires Maru*, which made the transit of the Canal on her initial voyage on August 3, 1930. The *Rio de Janeiro Maru* carried 78 passengers and 3,700 tons of cargo, made up principally of cotton, hides, and lubricating oils.

Starting from Kobe, the usual itinerary of the vessels in this service includes calls at Hongkong, Singapore, Durban, Cape Town, Buenos Aires, Santos, Rio de Janeiro, Habana, New Orleans, Galveston, Cristobal, Los Angeles, Yokohama, and Kobe. The transit of the Panama Canal is made in one direction only, from the Atlantic to the Pacific. Sailings are approximately monthly.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending September 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Essequibo.....	Pacific Steam Navigation Co.....	September 14.	September 14.		102
Baralt.....	Royal Netherlands S. S. Co.....	September 14.	September 14.		92
Ancon.....	Panama R. R. S. S. Line.....	September 15.	September 15.		709
Comedian.....	T. & J. Harrison Line.....	September 15.	September 15.		(*)
Champerico.....	Pacific Steam Navigation Co.....	September 16.	September 16.		697
Tolosa.....	United Fruit Co.....	September 14.	September 14.	20	56
Winnipeg.....	French Line.....	September 14.	September 14.	336	1
Feltre.....	Italian S. S. Line.....	September 14.	September 14.	(*)	45
Almagro.....	Pacific Steam Navigation Co.....	September 14.	September 15.	210	(*)
August Thyssen.....	Aluminium Line.....	September 15.	September 15.	383	(*)
Santa Inez.....	Grace Line.....	September 15.	September 15.	269	(*)
Guadeloupe.....	French S. S. Line.....	September 15.	September 17.	38	1,006
Brielle.....	Royal Netherlands S. S. Co.....	September 15.	September 17.	131	102
Pastores.....	United Fruit Co.....	September 15.	September 17.	501	50
Cauca.....	United Fruit Co.....	September 16.	September 19.	45	230
Castilla.....	United Fruit Co.....	September 16.	September 20.	44	73
Crynsen.....	Royal Netherlands S. S. Co.....	September 17.	September 17.	4	4
Indiana.....	French Line.....	September 17.	September 17.	290	3
Canada.....	Johnson Line.....	September 17.	September 17.	(*)	51
Lochkatrine.....	Royal Mail Steam Packet Co.....	September 17.	September 18.	22	394
Oreoma.....	Pacific Steam Navigation Co.....	September 17.	September 18.	66	2
Tela.....	United Fruit Co.....	September 17.	September 18.	812	60
Metapan.....	United Fruit Co.....	September 17.	September 18.	686	74
Santa Marie.....	Grace Line.....	September 17.	September 18.	125	207
Bridgetown.....	United Fruit Co.....	September 18.	September 19.	2	426
Manizales.....	North German Lloyd.....	September 17.	September 20.	821	105
Salvador.....	Pacific Steam Navigation Co.....	September 18.	September 18.	114	
Jason.....	Royal Netherlands S. S. Co.....	September 18.	September 18.	91	61
Aachen.....	North German Lloyd.....	September 18.	September 19.	68	163
Spreewald.....	Hamburg-American Line.....	September 18.	September 19.	4	106
Ebro.....	Pacific Steam Navigation Co.....	September 19.	September 19.	8	(*)
Corinthic.....	White Star Line.....	September 19.	September 19.	98	(*)
Crynsen.....	Royal Netherlands S. S. Co.....	September 19.	September 20.	4	133
Abraham Lincoln.....	Fred Olsen Line.....	September 19.	September 19.	(*)	169
Nosa King.....	N. O. & S. A. S. S. Co.....	September 19.	September 19.	47	1
Amapala.....	Standard Fruit & S. S. Co.....	September 19.	September 20.	122	412
San Clement.....	States S. S. Line.....	September 20.	September 20.	52	
Gruenwald.....	Hamburg-American Line.....	September 20.	September 20.	4	
Pella.....	Panama R. R. S. S. Line.....	September 20.	September 20.	173	(*)
Pearl Marie.....	Feuillebois.....	September 20.	September 20.	(*)	15
Salvador.....	Pacific Steam Navigation Co.....	September 27.	September 27.		1,129
Ebro.....	Pacific Steam Navigation Co.....	September 19.	September 19.		103
Gruenwald.....	Hamburg-American Line.....	September 21.	September 21.		528
Pastores.....	United Fruit Co.....	September 21.	September 21.	28	153
Parismina.....	United Fruit Co.....	September 21.	September 21.	23	3
Schwarzwald.....	Hamburg-American Line.....	September 21.	September 22.	67	1
Tela.....	United Fruit Co.....	September 21.	September 22.	(*)	94

* No cargo discharged.

* No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Atago Maru.....	Nippon Yusen Kaisha.....	September 21.	September 22.	236	(²)
Caldas.....	National Navigation Co.....	September 21.	September 27.	340	214
Nosa Prince.....	N. O. & S. A. S. S. Co.....	September 22.	September 22.	138	120
Murla.....	North German Lloyd.....	September 22.	September 22.	113	28
Ecuador.....	Panama Mail S. S. Co.....	September 22.	September 23.	35	421
Santa Elisa.....	Grace Line.....	September 22.	September 23.	16	20
Ulua.....	United Fruit Co.....	September 22.	September 24.	396	13
Artemisia.....	Hamburg-American Line.....	September 22.	September 24.	183	325
Los Angeles.....	Hamburg-American Line.....	September 23.	September 23.	44	1
Courageous.....	Roosevelt S. S. Co.....	September 23.	September 23.	70	(²)
Orazio.....	Italian S. S. Line.....	September 23.	September 25.	196	(²)
Guatemala.....	Panama Mail S. S. Co.....	September 23.	September 25.	613	138
Cristobal.....	Panama R. R. S. S. Line.....	September 24.	September 24.	2,877	
Washington.....	French Line.....	September 24.	September 24.	89	66
Cid.....	Pacific Steam Navigation Co.....	September 24.	September 24.	52	107
Sixaola.....	United Fruit Co.....	September 24.	September 25.	270	32
Annam.....	East Asiatic Co.....	September 24.	September 25.	85	40
Mississippi.....	French Line.....	September 24.	September 25.	70	390
Iriona.....	United Fruit Co.....	September 24.	September 25.	918	153
Cerigo.....	Hamburg-American Line.....	September 24.	September 27.	890	747
Davision.....	Leyland S. S. Line.....	September 25.	September 25.	639	
La Paz.....	Pacific Steam Navigation Co.....	September 25.	September 25.	15	(²)
Rugia.....	Hamburg-American Line.....	September 25.	September 25.	80	257
Oakland.....	Hamburg-American Line.....	September 25.	September 26.	459	459
Sparreholm.....	Aluminium Line.....	September 25.	September 26.	351	(²)
Bolivar.....	United Fruit Co.....	September 25.	September 26.	38	194
Aconagua.....	Chilean S. S. Line.....	September 26.	September 26.	(²)	10
Waunta.....	Standard Fruit & S. S. Co.....	September 26.	September 26.	470	(²)
Takai Maru.....	Osaka Shosen Kaisha.....	September 26.	September 26.	168	(²)
Tai Shan.....	Barber S. S. Line.....	September 26.	September 26.	17	51
Orbita.....	Pacific Steam Navigation Co.....	September 26.	September 26.	14	(²)
Atlantida.....	Standard Fruit & S. S. Co.....	September 26.	September 27.	104	416
Suriname.....	United Fruit Co.....	September 26.	September 27.	593	(²)
Tela.....	United Fruit Co.....	September 26.	September 27.	48	69
Narenta.....	Royal Mail Steam Packet Co.....	September 26.	September 27.	875	20
Creole Jefe.....	West India Oil Co.....	September 27.	September 27.	2,995	
Heredia.....	United Fruit Co.....	September 27.	September 27.	1	
Dora K.....	Feuillebois.....	September 27.	September 27.	(²)	33
San Felipe.....	States S. S. Co.....	September 27.	September 27.	11	(²)

¹ No cargo discharged.² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending September 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca.....	National Navigation Co.....	September 19.	September 20.		62
Atago Maru.....	Nippon Yusen Kaisha.....	September 21.	September 21.		214
Montebello.....	Union Oil Co.....	September 22.	September 22.	11,400	16
Somme.....	U. S. Government.....	September 22.	September 23.	74	2
City of San Francisco.....	Panama Mail S. S. Co.....	September 22.	September 27.	569	
Santa Elisa.....	Grace Line.....	September 23.	September 23.	18	145
Guatemala.....	Panama Mail S. S. Co.....	September 23.	September 24.	200	569
Courageous.....	Roosevelt S. S. Co.....	September 23.	September 23.	10	
Artemisia.....	Hamburg-American Line.....	September 23.	September 23.	220	
Ecuador.....	Panama Mail S. S. Co.....	September 23.	September 24.	130	1
Nosa Chief.....	N. O. & S. A. S. S. Co.....	September 24.	September 27.		244
Annam.....	East Asiatic Co.....	September 25.	September 25.	126	
Takai Maru.....	Osaka Shosen Kaisha.....	September 25.	September 26.	120	
Suriname.....	United Fruit Co.....	September 25.	September 26.	91	
Pacific Commerce.....	Canadian Transport Co.....	September 26.	September 28.	871	

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature, Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE—The above is based on two months observations at Cristobal, and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

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Tanker Traffic Through the Panama Canal in September, 1930.

During the month of September, 1930, 94 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 533,209, on which tolls of \$467,342.51 were paid. Cargo amounted to 466,264 tons. In point of net tonnage, tanker traffic decreased 15.2 per cent as compared with tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 1.9 per cent.

Tank vessels comprised 20.5 per cent of the total commercial transits through the Canal during the month; made up 23 per cent of the total Panama Canal net tonnage; were the source of 22.7 per cent of the tolls collected; and carried 22.6 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of September, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for September, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	11	52,699	\$39,691.52	4,359
Danzig.....	3	29,632	14,855.04	
French.....	1	5,068	3,648.96	
German.....	1	4,435	3,193.20	
Norwegian.....	6	33,127	23,916.24	
Swedish.....	2	14,174	10,205.28	
United States.....	26	153,012	114,492.53	11,882
Total, September, 1930.....	50	283,237	209,912.77	16,241
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, July, 1930.....	51	281,690	202,949.10	
Total, September, 1929.....	52	282,383	207,007.88	11,600
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,560
British.....	7	35,358	36,140.99	59,241
Danzig.....	1	6,310	6,682.50	11,300
French.....	1	6,997	8,288.40	11,505
German.....	1	4,340	4,792.50	8,160
Italian.....	1	4,320	4,626.25	7,292
Norwegian.....	6	31,427	33,259.00	58,595
United States.....	26	156,334	158,029.10	284,400
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, July, 1930.....	69	375,067	385,446.00	688,237
Total, September, 1929.....	49	267,364	270,361.74	465,053

The following tabulation shows the tanker traffic through the Canal during September, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	25	153,728	\$114,930.98	11,882
United States to South America.....	2	7,652	5,509.44	.....
United States to Hawaii.....	1	4,286	3,985.92	.....
Canada to United States.....	1	3,719	2,754.75	.....
Canada to South America.....	2	12,995	9,356.40	.....
West Indies to United States.....	1	6,050	4,356.00	.....
Europe to United States.....	14	73,165	52,711.59	.....
Europe to South America.....	4	21,642	17,207.69	4,359

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	22	126,352	\$126,452.25	230,534
United States to West Indies.....	3	16,815	18,939.35	29,815
United States to Europe.....	14	78,473	83,402.15	142,408
South America to United States.....	1	4,326	4,633.75	7,966
South America to Canada.....	2	13,804	14,517.50	28,000
South America to Central America.....	1	3,892	2,802.24	.....
South America to Europe.....	1	6,310	6,682.50	11,300

Of the tanker traffic passing through the Canal in September, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for September, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tolls of cargo.
<i>Atlantic to Pacific.</i>				
September, 1930.....	36	210,397	\$152,995.07	7,909
August, 1930.....	33	193,994	139,567.59	.....
July, 1930.....	45	248,984	179,400.78	.....
September, 1929.....	39	212,663	153,455.82	.....
<i>Pacific to Atlantic.</i>				
September, 1930.....	29	166,508	169,483.10	300,859
August, 1930.....	33	183,370	185,721.60	325,811
July, 1930.....	56	302,142	307,081.25	545,893
September, 1929.....	37	206,294	208,351.65	363,120

New Vessels for Panama Mail Steamship Company.

The Panama Mail Steamship Company announces that plans and specifications have been prepared for the construction of 4 new liners for the passenger and freight service of that company between California, Central America, and New York, via the Panama Canal. It is stated that the vessels are to cost approximately \$5,000,000 each and are to be ready for service within 22 months. Specifications call for turbo-electric drive to give a speed of 18 knots, and the plans show that the ships are to be 500 feet long, 70 feet beam, and 39 feet deep, with accommodations for 200 first-class passengers.

Traffic by Nationality for September, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for September, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	65	331,255	244,198	404,824	246,724	\$276,992.07	157,452
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,545
Colombian.....	4	574	554	880	550	673.70	800
Danish.....	3	17,845	12,391	20,940	12,938	15,488.75	9,490
Danzig.....	3	20,632	15,989	26,847	15,144	14,855.04	.....
Dutch.....	5	26,244	17,802	29,935	17,876	22,252.50	9,872
French.....	6	32,991	24,213	39,755	24,028	26,996.93	7,529
German.....	15	59,760	39,963	67,256	40,287	47,787.05	33,294
Italian.....	3	19,872	12,929	24,334	14,695	15,216.29	4,119
Japanese.....	8	44,496	35,890	56,442	35,695	44,862.50	49,870
Norwegian.....	13	73,759	53,330	88,647	52,630	52,866.29	28,341
Panamanian.....	1	6,055	3,998	7,044	3,988	4,997.50	3,944
Swedish.....	6	32,019	25,055	50,135	29,396	24,887.15	12,006
United States.....	104	550,967	421,416	686,331	419,255	473,434.53	277,327
Yugoslav.....	1	5,674	3,859	6,403	3,852	4,085.28	.....
Total, September, 1930.....	238	1,227,748	915,053	1,517,083	921,034	1,029,728.08	595,589
Total, September, 1929.....	278	1,277,640	981,844	1,621,511	988,574	1,105,577.70	746,289
Total, September, 1928.....	253	1,215,633	933,111	1,538,276	936,935	1,061,240.88	709,654

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$5,710.00	9,560
British.....	46	236,368	177,026	293,679	178,407	219,879.74	278,221
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,225
Colombian.....	5	737	718	1,113	716	796.70	373
Danish.....	4	16,947	14,201	21,428	14,254	17,751.25	25,808
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,300
Dutch.....	3	9,668	5,876	9,778	5,601	7,345.00	13,692
French.....	4	25,035	19,640	30,870	20,047	24,472.15	31,878
German.....	15	58,988	41,607	69,484	41,847	52,008.75	81,753
Italian.....	3	17,833	13,587	25,528	14,153	16,983.75	17,750
Japanese.....	7	35,624	31,277	45,732	30,949	38,598.60	47,341
Norwegian.....	21	88,635	64,498	107,398	64,288	80,622.50	144,347
Panamanian.....	3	7,073	4,069	6,710	4,163	5,080.95	5,472
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,800
United States.....	104	565,522	430,384	696,703	430,110	537,558.61	762,573
Yugoslav.....	1	3,759	3,899	6,361	3,850	4,873.75	9,900
Total, September, 1930.....	220	1,086,676	823,905	1,353,509	825,784	1,027,375.50	1,463,993
Total, September, 1929.....	245	1,147,621	870,696	1,436,521	873,097	1,096,211.70	1,686,494
Total, September, 1928.....	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,976	4,568	7,138	3,988	\$5,710.00	9,560
British.....	111	567,623	421,224	698,508	425,131	496,871.81	435,673
Chilean.....	2	9,410	6,932	14,620	7,952	8,965.00	3,770
Colombian.....	9	1,311	1,272	1,933	1,266	1,470.40	1,173
Danish.....	7	34,792	26,592	42,368	27,192	33,240.00	35,298
Danzig.....	4	26,942	21,335	35,787	20,194	21,537.54	11,300
Dutch.....	8	35,912	23,678	39,713	23,477	29,597.50	23,564
French.....	10	58,026	43,853	70,625	44,075	51,469.08	39,407
German.....	30	118,743	81,570	136,740	82,134	99,795.80	115,047
Italian.....	6	37,705	26,516	49,862	28,848	32,200.04	21,869
Japanese.....	15	80,120	67,167	102,174	66,644	83,461.10	97,211
Norwegian.....	34	162,394	117,828	196,045	116,913	133,488.79	172,688
Panamanian.....	4	14,028	8,067	13,754	8,151	10,078.45	9,416
Swedish.....	7	36,515	28,798	65,472	33,781	29,565.90	33,806
United States.....	208	1,116,489	851,800	1,383,034	849,365	1,010,993.14	1,039,900
Yugoslav.....	2	9,433	7,753	12,764	7,702	8,959.03	9,900
Total, September, 1930.....	453	2,314,424	1,738,958	2,870,592	1,746,818	2,057,103.58	2,059,582
Total, September, 1929.....	523	2,425,261	1,852,540	3,058,032	1,861,671	2,201,789.40	2,432,783
Total, September, 1928.....	487	2,295,053	1,771,095	2,909,454	1,777,124	2,111,230.56	2,313,011

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 4, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Javanese																	
Princes	27	21.00	28	6.15	23	12.45	28	13.50	441.0	60.0	20.0	New York, N. Y.	Manila, P. I.	General	2,866	9,240	6,145
Crescent Jefe	27	16.00	28	7.10	28	14.07	28	18.16	325.0	55.0	11.3	Maracaibo, Venez.	Bahia, C. Z.	Ballast	3,740	3,984	2,612
Point Arena	28	9.35	28	9.45	28	17.38	28	18.56	324.0	46.2	23.0	New Orleans, La.	San Francisco, Cal.	General, steel	8,241	4,387	3,151
Woodburn	28	10.30	28	10.40	28	17.58	28	18.56	355.0	48.0	15.0	Boston, Mass.	Arica, Chile	Ballast	5,434	12,083	8,503
Steel Ranger	28	10.45	28	10.55	28	18.13	28	22.40	424.2	56.2	25.11	Mobile, Ala.	Seattle, Wash.	General	3,924	2,658	1,435
Mahana	28	4.10	28	12.45	28	19.53	28	21.13	500.0	63.3	25.0	Liverpool, England	Pt. Chalmers, N. Z.	General	3,924	2,658	1,435
Clunepark	28	19.00	28	20.15	29	9.13	29	11.27	350.0	49.0	13.0	Newport News, Va.	Arica, Chile	Ballast	4,223	5,696	4,125
Lebore	28	12.20	29	6.05	29	13.06	29	14.15	549.6	72.2	21.8	Baltimore, Md.	Cruz Grande, Chile	Ballast	3,924	2,658	1,435
Manhattan	28	23.10	29	6.10	29	13.44	29	14.50	386.0	52.0	19.0	New Orleans, La.	Seattle, Wash.	General	4,223	5,696	4,125
Pendolope	29	00.10	29	7.20	29	14.37	29	21.31	470.0	63.0	18.3	Hamburg, Germany	Talara, Peru	Ballast	3,924	2,658	1,435
Eagle	29	0.45	29	7.25	29	14.47	29	15.45	410.0	56.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	3,924	2,658	1,435
Vistula	29	2.05	29	8.25	29	15.37	29	16.50	490.0	64.0	20.10	New York, N. Y.	Los Angeles, Calif.	Ballast	3,924	2,658	1,435
Greylock	29	6.25	29	8.45	29	16.37	29	17.45	430.7	54.3	25.3	Baltimore, Md.	Seattle, Wash.	Steel, general	7,781	7,946	5,698
Demark	29	9.00	29	8.40	29	16.57	29	19.00	350.0	49.0	13.6	Norfolk, Va.	Arica, Chile	Ballast	3,924	2,658	1,435
Barnbek	28	23.45	29	9.55	29	16.55	29	18.00	307.0	45.3	14.0	Boston, Mass.	Yavaros, Mexico	Ballast	3,924	2,658	1,435
Albert	29	3.30	29	14.40	29	21.36	29	22.50	409.8	54.0	18.9	Hamburg, Germany	Valparaiso, Chile	General	2,781	7,173	5,514
Vino Tinto	29		29		29	8.36						Cristobal, C. Z.	Gatun, C. Z.	General		7	7
No. 18, C. Z.																	
No. 20, C. Z.																	
No. 3782																	
No. 3843																	
Willzipo	30	5.30	30	6.15	30	13.36	30	14.50	415.0	55.7	20.0	Cristobal, C. Z.	Gatun, C. Z.	Unknown	16	16	16
Hague Maru	30	6.40	30	8.40	30	16.58	30	18.30	407.3	59.10	23.3	Baltimore, Md.	Seattle, Wash.	Unknown	3,500	7,731	5,805
Ohioan	30	7.55	30	8.25	30	15.12	30	16.15	404.0	53.7	20.0	New York, N. Y.	Shanghai, China	Cotton, resin	5,540	6,533	4,772
Capella	29	22.25	30	10.40	30	17.28	30	18.48	487.0	64.0	20.6	Boston, Mass.	Tacoma, Wash.	General	2,868	7,103	4,991
Western	30	17.50	30	18.05	30	11.30	30	12.55				Gothenburg, Swed.	Los Angeles, Calif.	Ballast	9,801	6,809	6,809
Sun	30	17.50	30	18.05	30	11.30	30	12.55				Chester, Pa.	Los Angeles, Calif.	Ballast	9,801	6,809	6,809
Alkmaar	30	5.05	30	6.10	30	12.50	30	14.55	447.0	62.0	20.5	Amsterdam, Holl'd	Valparaiso, Chile	General	3,170	9,505	6,644
Voco	30	22.00	30	6.15	30	13.50	30	15.55	460.0	62.6	20.0	Brussels, Germany	Los Angeles, Calif.	Ballast	9,174	6,106	6,106
Nordbo	30	22.15	30	7.25	30	14.12	30	15.55	380.0	53.6	15.3	Chester, Pa.	Talechano, Chile	General	2,750	6,190	4,569
Waziristan	1	4.15	1	7.30	1	15.02	1	16.20	390.0	53.5	16.0	Montreal, Canada	Vancouver, B. C.	Ballast	5,612	4,119	4,119
Lillian																	
Lukenbach	1	7.05	1	8.05	1	15.10	1	16.20	448.0	60.2	22.4	Boston, Mass.	Seattle, Wash.	General	4,000	9,294	6,865
Swan	1	11.35	1	11.45	1	16.52	1	19.48	395.5	54.0	16.0	Cristobal, C. Z.	Bahia, C. Z.	Ballast			
Badstetter												Greenock, England	Vancouver, B. C.	Ballast			

* Mine sweeper.

* Launch, towing barges.

* For dry docking.

* Motor ship.

* Tanker.

29	17	25	13	25	1	10	35	1	14	36	1	21	35	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317		
Medavia	2	1	13	25	1	10	50	1	20	50	1	20	50	1	20	10	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317		
Sancta Barbara	1	9	28	1	13	30	1	10	50	1	20	50	1	20	10	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
San Pedro	1	6	25	1	14	10	1	21	16	1	21	16	1	21	16	1	22	28	1	American.	Grace Line.	395	0	55	0	21	0	Philadelphia, Pa.	Seattle, Wash.	General.	4,266	7,330
John P.	1	6	25	1	14	10	1	21	16	1	21	16	1	21	16	1	22	28	1	American.	Quaker Line.	395	0	55	0	21	0	Philadelphia, Pa.	Seattle, Wash.	General.	4,266	7,330
Thodore	1	10	35	1	14	36	1	21	35	1	21	35	1	21	35	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
Rosenvelt	1	15	00	1	18	20	1	9	30	1	20	20	1	20	20	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
San Zotic	1	20	15	1	20	20	1	11	37	1	20	20	1	20	20	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
Myran	1	21	15	1	21	15	1	6	05	1	23	26	1	23	26	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
Resley City	1	21	40	1	21	40	1	7	10	1	23	26	1	23	26	1	22	45	1	Norwegian.	Anglo-Saxon Pet. Co.	420	8	58	5	20	4	N. Shields, Eng.	Los Angeles, Calif	Ballast.	6,669	4,317
Rochester	2	5	50	2	12	40	2	26	15	2	18	30	2	18	30	2	22	45	2	American.	U. S. Navy.	380	0	57	0	27	0	Vera Cruz, Mexico.	Balboa, C. Z.	Ballast.	6,992	5,005
Andromede	2	10	10	2	6	10	2	13	18	2	13	18	2	13	18	2	22	45	2	French.	Messageries Maritimes	430	0	57	0	27	0	Marseilles, France.	Noumea, New Cal.	General.	2,955	7,984
Chlorid	2	21	55	2	6	15	2	13	52	2	13	52	2	13	52	2	22	45	2	French.	Faine & Cleary	391	8	51	8	21	0	New York, N. Y.	Los Angeles, Calif	General.	5,549	5,472
President	3	4	05	3	7	20	3	14	35	3	21	38	3	21	38	3	22	45	3	American.	Dollar Line.	502	0	62	0	26	5	New York, N. Y.	San Francisco, Cal.	General.	3,328	12,023
Van Buren	3	6	00	3	7	30	3	15	47	3	10	45	3	10	45	3	22	45	3	American.	Van Buren Line.	586	0	39	0	26	5	New York, N. Y.	San Francisco, Cal.	General.	3,328	12,023
Pensylvania	3	21	05	3	8	20	3	17	59	3	10	45	3	10	45	3	22	45	3	American.	Ship Fast Line.	586	0	39	0	26	5	New York, N. Y.	Honolulu, T. H.	General.	3,328	12,023
Tusitula	3	21	05	3	8	20	3	17	59	3	10	45	3	10	45	3	22	45	3	American.	Ship Fast Line.	586	0	39	0	26	5	New York, N. Y.	Honolulu, T. H.	General.	3,328	12,023
Benwende	3	22	18	3	9	30	3	16	32	3	18	05	3	18	05	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Went Carlet	3	3	35	3	3	35	3	17	45	3	18	56	3	18	56	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Pueblo	3	6	30	3	9	45	3	18	34	3	18	34	3	18	34	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Guilburg	3	6	55	3	10	45	3	18	48	3	18	48	3	18	48	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Dalbar	3	11	15	3	11	55	3	20	08	3	21	38	3	21	38	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
30	15	20	3	11	45	3	20	08	3	21	38	3	21	38	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625	
Cauba	3	12	15	3	13	10	3	21	18	3	22	05	3	22	05	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Caucora	3	12	45	3	15	30	3	23	05	3	23	05	3	23	05	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Incomorb	3	16	40	3	19	30	3	9	41	3	14	35	3	14	35	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Comliebank	3	23	45	3	6	05	3	13	37	3	14	35	3	14	35	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
King Edwin	3	24	05	3	6	12	3	14	15	3	14	35	3	14	35	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Cambrai	3	29	05	3	6	12	3	14	15	3	14	35	3	14	35	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Buenaventura	3	3	55	3	6	15	3	16	18	3	17	30	3	17	30	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Lio	3	5	55	3	6	15	3	16	18	3	17	30	3	17	30	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Parracombe	3	18	15	3	7	30	3	15	45	3	16	18	3	16	18	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Sorvard	3	21	35	3	7	30	3	15	20	3	16	18	3	16	18	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Goetstar	3	23	30	3	8	35	3	16	59	3	18	05	3	18	05	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
30	18	40	3	9	50	3	17	50	3	17	50	3	17	50	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625	
Durazzo	3	6	10	3	9	30	3	17	53	3	18	05	3	18	05	3	22	45	3	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Bufalo Bridge	1	19	35	1	11	05	1	18	50	1	18	50	1	18	50	1	22	45	1	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Asutula	1	19	35	1	11	05	1	18	50	1	18	50	1	18	50	1	22	45	1	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Minnesotan	4	12	25	4	12	45	4	19	17	4	20	20	4	20	20	4	22	45	4	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
City of	4	14	00	4	14	05	4	21	34	4	22	40	4	22	40	4	22	45	4	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Adelaide	4	14	38	4	14	50	4	22	40	4	22	40	4	22	40	4	22	45	4	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625
Acetoline	4	14	38	4	14	50	4	22	40	4	22	40	4	22	40	4	22	45	4	American.	McCormick S. C. Co.	410	5	54	0	22	12	Rosario, Argentine.	Buenaventura, Col.	Cattle.	6,578	6,625

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Transport.

Sailing 8

1 Tanker.

Yali	2	9.00	2	9.52	2	17.05	German	Roland Line	216.5	32.9	15.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	972	1,105	698
Pacific Maru	2	9.30	2	10.20	2	18.00	Japanese	Kowakaki Kisen Kaisha	385.5	51.0	25.0	N. Kyska, Kam.	London, England	(+)	6,470	6,251	4,736
El Lobo	2	11.35	2	12.09	2	19.15	British	C. T. Bowring & Co.	385.2	51.0	24.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	6,090	4,851	3,326
Chateau	2	15.45	2	16.25	2	22.45	4	U. S. Army	448.0	58.2	24.0	Honolulu, T. H.	Brooklyn, N. Y.	General	349		
Thierry	2	18.20	2	18.50	3	11.35	3	Munson Line	385.0	53.1	25.0	Portland, Oreg.	Philadelphia, Pa.	Lumber, general	6,000	5,525	4,187
Birmingham	2	15.55	3	16.15	3	14.25	3	Isthmian S. S. Lines	395.5	55.0	27.4	N. Westminster, B.C.	Avonmouth, Eng.	(+)	7,938	7,304	5,188
Oakworth	2	23.30	3	16.55	3	15.40	3	Canadian Transp. Co.	400.0	53.0	24.0	Vancouver, B. C.	W. Hartlepool, Eng.	Lumber, general	5,000	5,615	3,757
San Marcos	2	8.30	3	7.17	3	16.55	3	Quaker Line	410.0	51.0	25.0	Portland, Oreg.	Wilmington, Del.	Lumber, general	6,019	7,755	4,895
Charles Nelson	2	8.30	3	7.49	3	18.05	3	Charles Nelson & Co.	396.0	53.1	23.6	Portland, Oreg.	New York, N. Y.	Lumber, general	5,500	5,659	4,138
Wigand	3	7.10	3	8.15	3	19.50	4	North German Lloyd	393.0	54.0	27.0	Corral, Chile	Hamburg, Germany	General	7,697	6,573	4,629
Dakota	3	7.40	3	8.25	3	18.25	3	Amo-Hawaiian Line	407.7	53.7	25.2	Seattle, Wash.	Boston, Mass.	General	7,672	7,156	5,094
Danville	3	11.15	3	11.51	3	19.40	3	Love Shipping Co.	405.0	52.0	24.0	Vancouver, B. C.	Wheat, lumber	7,464	5,650	4,071	
Cape Orizabal	3	6.30	3	13.04	3	21.20	4	British Government	470.0	46.0	17.0	Los Angeles, Calif.	Kingsport, Jamaica	Gasoline	9,320	7,394	5,099
Huguenot	3	11.00	3	13.41	3	21.00	3	Richfield Oil Co.	455.2	56.2	26.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,554	7,394	5,099
Guayquil	3	13.25	3	14.19	3	21.45	3	Sun Oil Co.	483.6	66.0	27.0	Los Angeles, Calif.	Chesler, Pa.	General	1,130	2,874	1,944
Nagaya	3	15.35	3	15.50	4	11.35	4	Panama R. R. S. S. Line	251.0	43.6	17.0	Guayquil, Ecuador	New York, N. Y.	General	9,031	7,484	5,212
Mefon	3	17.10	4	6.45	4	14.45	4	U. S. Navy	243.0	38.0		Balboa, C. Z.	Cristobal, C. Z.	Gasoline	7,440	6,192	4,347
San Macdonio	4	5.30	4	6.59	4	16.05	4	Pennsylvania Ship. Co.	425.8	57.0	26.0	Los Angeles, Calif.	London, Eng.	Gasoline	6,298	6,615	4,966
Christenson	3	20.10	4	8.15	4	16.25	4	Anglo-Mexican Pet. Co.	407.2	52.3	25.0	Los Angeles, Calif.	London, Eng.	Gasoline	6,298	6,615	4,966
Edgar F.	4	60.10	4	8.47	4	18.05	4	Sudden & Christenson	499.5	54.2	24.0	Portland, Oreg.	New York, N. Y.	Lumber	6,298	6,615	4,966
Northpool	4	2.00	4	9.26	4	19.45	4	Lukenbach Line	435.0	57.1	27.0	Portland, Oreg.	Mobile, Ala.	General	6,420	8,568	6,648
Hilda	3	21.20	4	10.04	4	19.25	4	DuPont de Nemours	351.0	53.9	26.0	Toeplitz, Chile	Wilmington, Del.	Nitrate of soda	7,950	6,252	4,558
Knudsen	3	21.20	4	10.04	4	19.25	4	DuPont de Nemours	351.0	53.9	26.0	Toeplitz, Chile	Wilmington, Del.	Nitrate of soda	7,950	6,252	4,558
Lompoc	2	6.30	4	10.28	4	23.00	4	K. Knutsen	470.3	64.5	23.0	Talara, Peru	Vallo, Norway	Crude oil	10,121	9,474	6,489
Galdas	3	10.30	4	15.10	4	21.55	4	C. T. Bowring & Co.	435.0	55.0	27.0	Los Angeles, Calif.	Cristobal, C. Z.	Ballast	7,406	5,423	
Arkansas	4	15.09	4	16.08	5	12.29	6	National Navigation Co.	116.0	21.1	10.0	Buenaventura, Col.	Cristobal, C. Z.	General	9,980	7,678	5,563
								French Line	448.8	53.2	27.3	Corral, Chile	Le Havre, France	General	9,980	7,678	5,563

20 Survey ship.

21 Canned fish and barley.

22 Wheat, barley, and canned goods.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

Date	Vessel	Line	Arrivals	Departures	Remarks
September 28	Ulua	United Fruit Co.	Port Limon, Costa Rica.	No. 300-N ²¹	Talara via waypoints.
September 28	Suyvesant	Royal Netherlands S. S. Co.	Amsterdam and waypoints.	No. 0664 ²¹	Pan American Airways
September 29	Calamare	United Fruit Co.	New York via Habana.	No. 9770 ²¹	Pan American Airways
September 29	Cundinamarca	Scandinavian Airplane Co.	Barraquilla and waypoints	Ulua	New York via Habana.
September 30	No. 9670 ²²	Pan American Airways	San Salvador and waypoints.	Cristobal	New York via Haiti.
September 30	Magallanes	Spanish Line	Barcelona and waypoints.	Heredia	New Orleans and waypoints
September 30	Pellerin de la Touche	French Line	Havre and waypoints.	Davidson	Liverpool and waypoints.
September 30	No. 300-N ²¹	Pan American-Grae Airways	Talara via waypoints.	No. 9137 ²³	San Salvador and waypoints.
October 1	Iroma	Hamburg-American Line	Hamburg via waypoints.	No. 9053 ²³	Pan American Airways
October 1	Zacapa	United Fruit Co.	Puerto Colombia.	Suyvesant	Miami via waypoints.
October 1		United Fruit Co.	New York via Kingston.	Atacama	Port Limon, Costa Rica.
October 1				October 1	Colon, Rep. of Panama.

* Other than ships passing through the Canal.

²¹ Motor boat.

²² Air mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.				
* ARRIVALS.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
October 1.....	Anachucina ²⁵	United Fruit Co.	Colon, Rep. of Panama.	October 1.....	Annetta I. ²⁵	A. Tagaropulos	Colon, Rep. of Panama.		
October 1.....	Annetta I. ²⁵	A. Tagaropulos	Colon, Rep. of Panama.	October 1.....	Inapaquina ²⁵	A. Tagaropulos	Colon, Rep. of Panama.		
October 1.....	Inapaquina ²⁵	A. Tagaropulos	Colon, Rep. of Panama.	October 1.....	Calamares	United Fruit Co.	Port Limon, Costa Rica.		
October 1.....	Castilla.....	United Fruit Co.	New Orleans, La.	October 1.....	Magdalena	Hamburg-American Line	Port Limon, Costa Rica.		
October 1.....	No. 9664 ²⁶	Pan American Airways	San Salvador and waypts.	October 2.....	No. 300-N ²⁶	Pan American-Grace Airways	Talara via wayports.		
October 2.....	No. 142-M ²⁶	Pan American Airways	Miami via wayports.	October 2.....	No. 144-M ²⁶	Pan American Airways	Pto. Cabello and waypts.		
October 2.....	Dellhan.....	Colombian S. S. Line	Liverpool via wayports.	October 2.....	Zacapa.....	Pan American Airways	Panama, Rep. of Panama.		
October 2.....	Baracoa.....	Colombian S. S. Line	New York via wayports.	October 2.....	Castilla.....	United Fruit Co.	New York via wayports.		
October 3.....	Stuyvesant	Standard Fruit & S. S. Co.	New Orleans and Habana.	October 2.....	Fellerin de la Touche	French Line	Port Limon, Costa Rica.		
October 3.....	Stuyvesant	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	October 2.....	No. 998-N ²⁶	Pan American Airways	Havre via wayports.		
October 4.....	Camden.....	Hamburg-American Line	Curacao, D. W. I.	October 3.....	No. 9670 ²⁶	Pan American Airways	Panama, Rep. of Panama.		
October 4.....	Cartago.....	United Fruit Co.	New Orleans and Habana.	October 3.....	Cundinamarca C-33 ²⁶	Scandia Airplane Co.	San Salvador and waypts.		
October 4.....	No. 300-N ²⁶	Pan American-Grace Airways	Talara via wayports.	October 3.....	Baracoa.....	Colombian S. S. Line	Barraquilla and waypts.		
October 4.....	No. 9685 ²⁶	Pan American Airways	San Salvador and waypts.	October 4.....	Pearl Marie ²⁷	G. I. Bryan	New York via wayports.		
October 4.....	Pearl Marie ²⁷	G. I. Bryan	Colon, Rep. of Panama.	October 4.....	Iriona.....	United Fruit Co.	Bluefields, Nicaragua.		
October 4.....				October 4.....	Stuyvesant	Royal Netherlands S. S. Co.	New Orleans and waypts.		
October 4.....				October 4.....	Amapala.....	Standard Fruit & S. S. Co.	Amsterdam and waypts.		
²⁵ Motor boat. ²⁷ Motor schooner.					PORT OF BALBOA.				
September 28.....	Condor.....	Grace Line	Tacoma, Wash.	October 3.....	Condor.....	Grace Line	Valparaiso, Chile.		
September 29.....	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.	September 29.....	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.		
September 30.....	La Union ²⁷	A. Valdez	Panama Bay, R. P.	October 3.....	La Union ²⁷	A. Valdez	Panama Bay, R. P.		
October 3.....	Nueva Panama ²⁸	Hans Elliot	Panama Bay, R. P.	October 3.....	Nueva Panama ²⁸	Hans Elliot	Panama Bay, R. P.		
October 3.....	Real ²⁷	Hans Elliot	Panama Bay, R. P.	October 4.....	Real ²⁷	Hans Elliot	Panama Bay, R. P.		
October 3.....	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.	October 3.....	Dos Hermanos ²⁷	A. Valdez	Panama Bay, R. P.		
October 3.....	La Perla.....	United Fruit Co.	San Francisco, Calif.	October 4.....	La Perla.....	United Fruit Co.	San Francisco, Calif.		
²⁸ Motor ship.					* Other than ships passing through the Canal.				

Comparison of Canal Traffic in September, 1930, with September Traffic in Previous Years.

The commercial traffic through the Panama Canal during the month of September, 1930, showed a slight decrease as compared with traffic in the preceding month, and an extensive decrease as compared with the corresponding month in 1929.

The 458 transits in September, 1930, are fewer by 65, or 12.4 per cent, than the 523 transits in September of last year, while the net tonnage (Panama Canal measurement), aggregating 2,314,424, was less by 110,837 tons, or 4.6 per cent, than the total of 2,425,261 tons in September, 1929. The cargo tonnage of 2,059,582 for September, 1930, shows a decline of 373,201 tons, or 15.3 per cent, from the total of 2,432,783 tons passing through the Canal in September, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of September each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on July 30th following:

Calendar year.	Month of September.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914	¹ 56	217,527	323,094	1915	² 102	361,197	465,567
1915	101	350,291	464,647	1916	63	199,687	257,813
1916	153	503,645	645,046	1917	150	493,213	583,213
1917	188	573,166	724,172	1918	172	547,839	627,659
1918	179	523,341	548,489	1919	169	510,416	576,385
1919	170	586,186	638,270	1920	206	712,170	781,298
1920	256	1,008,785	1,009,557	1921	241	951,323	966,601
1921	221	925,137	754,394	1922	228	951,455	907,075
1922	240	1,070,410	1,138,188	1923	331	1,550,482	1,630,656
1923	413	2,044,552	2,168,703	1924	436	2,179,073	2,249,550
1924	395	1,976,213	2,112,264	1925	399	1,904,596	1,996,570
1925	383	1,831,030	1,801,988	1926	433	2,064,549	2,169,787
1926	446	2,186,804	2,230,547	1927	456	2,185,651	2,312,351
1927	540	2,532,942	2,397,753	1928	538	2,454,886	2,469,226
1928	487	2,295,053	2,313,011	1929	534	2,468,483	2,555,250
1929	523	2,425,261	2,432,783	1930	515	2,493,385	2,502,519
1930	458	2,314,424	2,059,582	.....	³ 488	2,425,733	2,335,939

¹ Canal opened August 15, 1914.

² Average for 10½ months of fiscal year ended June 30, 1915.

³ First 9 months of calendar year 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 2, 1930.

No. 771.

Caribbean Sea, lights reported extinguished. The French S. S. *Pellerin de la Touche* reports the following lights extinguished under date of September 26, 1930:

1. *Morro del Robledar, west point of Margarita Island.* Approximate position: Latitude 11° 03' N., longitude 64° 23' W.

2. *Ranchos Point light, north side of Tortuga Island.* Approximate position: Latitude 10° 58' 20" N., longitude 65° 18' 10" W.

(See Notice to Mariners No. 768, Balboa Heights, dated September 24, 1930).

The S. S. *Baracoa* reports the following under date of October 1, 1930:

Tesoro Island light, approaches to Cartagena, Colombia. Not burning at 7.35 p. m., approximate position: Latitude 10° 14' 10" N., longitude 75° 44' 50" W.

H. BURGESS,
Governor.

New Vessel for Pacific-Argentine-Brazil Line.

The McCormick Steamship Company announces the purchase from the United States Shipping Board of the steamer *Emergency Aid* for use in the service of the Pacific-Argentine-Brazil Line from the Pacific coast to the east coast of South America. The vessel is of the three-island type, of 8,800 deadweight tons, with steam turbine propulsion. She was used by the Shipping Board in the Gulf-European service prior to her charter to the McCormick Steamship Company during the early part of 1929. The vessel has been in San Francisco since the completion of her charter last January.

The Pacific-Argentine-Brazil Line was established by the United States Shipping Board and was operated prior to the advent of the McCormick control about five years ago by Swayne & Hoyt, Inc. In addition to the *Emergency Aid*, the following vessels are in the service: *West Cactus*, *West Notus*, *West Camargo*, *West Ira*, *West Ivis*, *West Nilus*, *West Mahwah*, and *Hollywood*. The *West Ira*, *West Ivis*, *West Camargo*, and *Hollywood* are fitted with refrigeration chambers for carriage of cold meats and fruit. With sailings approximately every 20 days, the vessels proceed from north Pacific ports of the United States to Argentina and Brazil via the Strait of Magellan, thence through the Panama Canal to San Francisco. Accommodations are provided for a limited number of passengers.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 4, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		September 28		930
Heredia	United Fruit Co.		September 28		29
Davistan	Leyland S. S. Line		September 29		174
Ulva	United Fruit Co.	September 28	September 28		162
Stuyvesant	Royal Netherlands S. S. Co.	September 28	October 1	5	3
Alvarado	Pacific Steam Navigation Co.	September 29	September 29	114	12
Modavia	Donaldson Line	September 29	September 29	(¹)	365
Albert Voegler	Hamburg-American Line	September 29	September 29	89	89
Santa Teresa	Grace Line	September 29	September 29	182	(¹)
Calamares	United Fruit Co.	September 29	October 1	1,217	47
Alkmaar	Royal Netherlands S. S. Co.	September 30	October 1	110	122
Pellerin de la Touche	French Line	September 30	October 2	95	298
Cauca	National Navigation Co.	September 30	October 3	68	216
Durazzo	Hamburg-American Line	September 30	October 4	550	173
Magallanes	Spanish Line	September 30	October 4	175	596
Santa Barbara	Grace Line	October 1	October 1	102	98
San Pedro	Pacific-Atlantic Line	October 1	October 1	154	(¹)
Tono	Chilean S. S. Line	October 1	October 1	55	1
Magdalena	Hamburg-American Line	October 1	October 1	132	101
Zacapa	United Fruit Co.	October 1	October 2	597	130
Castilla	United Fruit Co.	October 1	October 2	648	181
Friona	United Fruit Co.	October 1	October 2	(¹)	37
Acapulca	Pacific Steam Navigation Co.	October 1	October 4	448	982
Lechgoil	Pacific Steam Navigation Co.	October 2	October 2	(¹)	128
Delalini	Leyland S. S. Line	October 2	October 2	362	(¹)
Barneveld	Royal Netherlands S. S. Co.	October 2	October 2	60	54
Burult	Royal Netherlands S. S. Co.	October 2	October 2	235	
Tacuna	Hamburg-American Line	October 2	October 3	23	257
Buenaventura	Panama R. R. S. S. Line	October 2	October 4	850	132
Baracoa	United Fruit Co.	October 2	October 3	8	291
Weinand	North German Lloyd	October 3	October 3	30	32
Stuyvesant	Royal Netherlands S. S. Co.	October 3	October 4	(¹)	378
Amapala	Standard Fruit & S. S. Co.	October 3	October 4	67	389
Magdalena	Hamburg-American Line	October 4		(¹)	
Camden	United Fruit Co.	October 4		7,021	
Cartago	United Fruit Co.	October 4		83	
Guayaquil	Panama R. R. S. S. Line	October 4	October 4	321	167

¹ No cargo discharged.² No cargo laded.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 6, 1930.

No. 772.

Caribbean Sea, Serrana Bank, Southwest Cay, light extinguished. The S. S. *Huguenot* reports that on October 5, 1930, at 1 a. m., when passing Southwest Cay, Serrana Bank, at a distance of 5 miles, with the atmosphere clear, the light was not visible and apparently extinguished. Approximate position: Latitude 14° 16' 40" N., longitude 80° 23' 50" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 6, 1930.

No. 773.

Panama Bay, Perlas Islands, measured mile constructed. The following information is furnished by the Commandant of the Fifteenth Naval District at Balboa, C. Z.:

A measured mile has been constructed by the U. S. S. *Niagara* on the west coast of Pedro Gonzales Island in the Perlas group and is available for any vessels desiring to use it.

The beacons are located as follows:

<i>Southern range.</i>	<i>Latitude.</i>	<i>Longitude.</i>
(a) Seaboard tower	8° 24' 21.28" N.	79° 08' 02.714" W.
(b) Inshore tower	8° 24' 21.28" N.	79° 07' 54.394" W.
Distance between towers, 835 feet.		

<i>Northern range.</i>	<i>Latitude.</i>	<i>Longitude.</i>
(c) Seaboard tower	8° 25' 21.611" N.	79° 07' 48.681" W.
(d) Inshore tower	8° 25' 21.611" N.	79° 07' 44.781" W.
Distance between towers, 392 feet.		
Distance between southern and northern ranges, 6,080.51 feet.		

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 7, 1930.

No. 774.

Ecuador, Gulf of Guayaquil, buoys and beacons established. The Ecuadorean Legation in Panama is the authority for the following information concerning the establishment of buoys and beacons in the Gulf of Guayaquil:

Lighthouse at Puerto de Balsas: Characteristics, flashing white light; period 6.8 seconds; flash 0.6 seconds, eclipse 6.2 seconds. Approximate position: Latitude 2° 35' 00" S., longitude 79° 53' 32" W.

Buoy at Puña Bar: Characteristics, flashing white light; period 3 seconds; flash 1 second, eclipse 2 seconds. Approximate position: Latitude 2° 42' 04" S., longitude 79° 55' 46" W.

This buoy marks the south head of the Isla Verde shoal in the 3 fathom deep of the bank in the lowest Ziciglia Tide. (At approximately 3 cable lengths can be found the 10 fathom deep edge of the bank and at 4 cable lengths that of the 15 fathom depth toward the southeast.)

See Notice to Mariners No. 764, Balboa Heights, September 22, 1930.

Buoy on Salinas Point (Puña Island): Characteristics, group flashing white; period 10 seconds; flash 0.5 seconds, eclipse 2.0 seconds, flash 0.5 seconds, eclipse 7.0 seconds. Approximate position: Latitude 3° 04' 15" S., longitude 80° 20' 15" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 7, 1930.

No. 775.

Ecuador, Bellaca Point, Bahia de Caraquez, light established. The following report was received by the Hamburg-American Line, Cristobal, C. Z., from their Guayaquil representative:

A new light has been established on Bellaca Point, Bahía de Caraquez, Ecuador. Characteristics: Group flashing white; period 10 seconds, flash 0.5 second, eclipse 2.0 seconds, flash 0.5 second, eclipse 7.0 seconds.

Approximate position: Latitude 0° 36' 00" S., longitude 80° 27' 15" W.

H. BURGESS,
Governor.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
<i>Ancon</i>	September 30.	October 5....	October 8....	October 12....	October 15....	October 20.
<i>Cristobal</i>	October 15....	October 20....	October 23....	October 28....	October 31....	November 5.
<i>Ancon</i>	October 28....	November 2....	November 5....	November 9....	November 12.	November 17.
<i>Cristobal</i>	November 11.	November 16.	November 19.	November 23.	November 26.	December 1.
<i>Ancon</i>	November 25.	November 30.	December 3....	December 7....	December 10..	December 15.
<i>Cristobal</i>	December 9....	December 14..	December 17..	December 21..	December 24..	December 29.
<i>Ancon</i>	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

* Due to discontinuance of the daylight saving time, departure after *S. S. Cristobal*, Sept. 15th, will be at 4 p. m., standard time.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	No visitors permitted in nursery.
Nursery.....	
Section "C:"	
Ward 9, Colored, male.....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 14, White, male, G. U.....	
Section "D:"	
Ward 15, American, male (surgical).....	Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office.

Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

THE PANAMA CANAL RECORD

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Commercial Traffic Through the Panama Canal in September, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of September, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for September, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	73	399,818	302,533	488,437	302,385	\$343,051.19	291,138
East coast of United States to west coast of South America:							
British	10	32,602	26,013	43,377	26,529	27,278.18	10,611
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	1,545
Swedish	1	4,421	3,743	15,339	4,377	3,183.12	.....
United States	14	61,523	49,393	87,847	49,344	49,620.13	15,519
Total	26	103,251	82,615	153,873	84,226	84,413.93	27,675
Europe to west coast of United States:							
British	11	55,575	43,799	69,737	43,692	42,346.65	7,124
Danzig	1	6,338	5,236	8,956	5,041	4,563.36	.....
Dutch	1	7,551	5,776	9,399	5,814	7,220.00	2,301
French	2	10,369	8,588	13,682	8,153	7,465.68	.....
German	2	10,779	7,620	13,122	7,693	7,975.70	4,795
Italian	1	4,507	3,352	5,604	3,456	3,245.04	.....
Norwegian	4	27,528	22,144	36,636	21,430	19,820.16	.....
Swedish	3	18,146	14,834	24,173	16,708	13,606.53	.....
Total	25	140,793	111,349	181,309	111,987	106,243.12	14,230
Europe to west coast of South America:							
British	6	33,587	26,741	43,723	27,143	33,426.25	21,669
Danzig	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch	2	10,895	7,185	12,446	7,244	8,981.25	5,599
French	1	4,984	4,249	6,713	4,198	5,311.25	4,345
German	4	20,995	14,104	22,994	13,892	17,630.00	16,467
Italian	1	9,373	5,223	11,669	6,779	6,528.75	987
Norwegian	2	10,875	9,300	15,252	9,047	7,830.00	.....
Swedish	1	3,967	3,072	5,065	4,065	3,840.00	7,062
Total	18	100,803	75,142	126,801	77,375	87,958.94	56,120
Europe to west coast of Canada:							
British	5	29,290	21,232	34,498	21,271	24,289.64	5,274
Danish	2	13,362	9,896	16,746	10,406	12,370.00	4,300
Dutch	1	7,056	4,547	7,310	4,495	5,683.75	1,881
French	3	17,638	11,376	19,360	11,677	14,220.00	3,184
German	3	18,842	12,320	20,725	12,695	14,921.28	9,273
Italian	1	5,992	4,354	7,061	4,460	5,442.50	3,132
Norwegian	2	11,097	6,356	10,692	6,550	7,945.00	3,192
Swedish	1	5,485	3,406	5,558	4,246	4,257.50	4,944
Total	18	108,762	73,487	121,860	75,830	89,129.67	35,180

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Far East:							
British.....	4	20,699	13,688	22,973	14,139	\$17,110.00	19,705
Danish.....	1	4,483	2,495	4,194	2,532	3,118.75	5,199
Japanese.....	7	36,870	30,449	46,815	29,847	38,061.25	46,161
Norwegian.....	2	9,193	4,998	8,526	4,983	6,247.50	11,444
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	3,944
United States.....	2	11,176	8,365	12,013	7,389	10,456.25	11,815
Total.....	17	89,376	63,993	101,565	62,883	79,991.25	98,259
Cristobal to west coast of South America:							
Colombian.....	4	574	554	880	550	673.70	800
Dutch.....	1	742	294	780	323	367.50	91
German.....	4	3,491	2,260	4,347	2,334	2,825.00	1,039
Total.....	9	4,807	3,108	6,007	3,207	3,866.20	1,939
Europe to Australasia:							
British.....	7	52,491	38,026	63,793	39,578	47,337.00	38,101
East coast of United States to Australasia:							
British.....	4	26,935	17,775	28,527	17,789	22,218.75	8,852
Norwegian.....	1	4,944	2,666	4,562	2,760	3,332.50	7,300
United States.....	1	5,002	4,549	5,867	3,660	5,686.25	2,128
Total.....	6	36,881	24,990	38,956	24,209	31,237.50	18,280
East coast of United States to Philippine Islands:							
British.....	4	25,163	13,805	25,043	13,971	17,256.25	13,818
East coast of United States to west coast of Canada:							
British.....	1	4,318	3,094	4,929	3,073	3,108.96	.....
United States.....	3	12,539	9,673	15,660	9,615	12,091.25	19,550
Total.....	4	18,857	12,767	20,589	12,688	15,200.21	18,550
East coast of United States to Hawaiian Islands:							
United States.....	4	19,439	13,055	21,445	13,053	14,810.58	16,094
Foreign vessels in ballast—United States inter-coastal:							
British.....	1	4,634	4,037	6,498	4,040	3,336.48	.....
Danzig.....	1	8,167	5,485	8,952	5,096	5,880.24	.....
Norwegian.....	1	6,604	5,517	9,153	5,527	4,754.88	.....
Total.....	3	19,405	15,039	24,603	14,663	13,971.60	.....
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	2,527
Around the world:							
United States.....	2	22,075	17,737	29,703	17,712	22,171.25	7,070
East coast of Canada to Australasia:							
British.....	2	8,597	6,612	10,863	6,607	8,265.00	7,729
West Indies to Far East:							
British.....	1	4,102	3,167	5,106	3,165	3,958.75	6,654
Norwegian.....	1	3,518	2,349	3,916	2,323	2,936.25	6,405
Total.....	2	7,620	5,516	9,022	5,493	6,895.00	13,059
Cristobal to west coast of United States:							
United States.....	2	4,637	3,781	6,415	3,802	4,040.63	213
East coast of Canada to west coast South America:							
British.....	2	12,995	11,192	20,830	10,554	9,356.40	.....
East coast of Canada to west coast of United States:							
United States.....	1	3,719	3,673	5,187	3,686	2,754.75	.....
East coast of Central America to Australasia:							
British.....	1	4,521	3,179	4,934	3,072	3,973.75	5,251
East coast of South America to west coast of Canada:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	4,800

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of South America to Far East:							
Japanese.....	1	7,626	5,441	9,627	5,848	\$6,801.25	3,709
Canadian intercoastal:							
British.....	1	4,075	3,258	5,482	3,375	4,072.50	2,674
West Indies to west coast of United States:							
United States.....	1	6,050	5,140	8,207	5,092	4,356.00	.....
West Indies to west coast of South America:							
British.....	1	4,033	3,177	5,135	3,169	2,903.76	.....
Europe to west coast of Central America:							
German.....	1	3,297	2,191	3,622	2,239	2,738.75	1,720
Africa to west coast of South America:							
Yugoslav.....	1	5,674	3,859	6,403	3,852	4,085.28	.....
East coast of United States to west coast of Central America:							
German.....	1	2,356	1,468	2,446	1,434	1,696.32	.....
Africa to Australasia:							
British.....	1	4,612	2,835	4,545	2,842	3,543.75	7,462
Grand total, Sept., 1930.....	238	1,227,748	915,053	1,517,083	921,034	1,029,728.08	595,559
Grand total, Sept., 1929.....	278	1,277,640	981,844	1,621,511	988,574	1,105,577.70	746,289
Grand total, Sept., 1928.....	253	1,215,633	933,111	1,538,276	936,935	1,061,240.88	709,654

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	73	414,904	313,266	506,953	313,269	\$391,357.86	565,165
West coast of Canada to Europe:							
British.....	12	63,242	41,587	70,208	41,622	51,983.75	91,342
Danish.....	2	10,998	9,456	13,571	9,469	11,820.00	18,103
French.....	1	7,475	4,446	7,817	4,667	5,557.50	8,998
German.....	3	19,753	12,690	21,753	13,098	15,862.50	26,217
Italian.....	1	5,907	4,372	7,057	4,455	5,465.00	8,757
Japanese.....	2	10,116	9,232	12,451	9,418	11,388.05	16,816
Norwegian.....	4	19,676	12,397	20,559	12,532	15,496.25	28,800
United States.....	2	11,470	8,286	13,270	8,276	10,357.50	17,244
Total.....	27	148,727	102,466	166,686	103,537	127,930.55	216,277
West coast of South America to Europe:							
British.....	7	33,560	25,060	42,592	26,348	32,075.00	41,733
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,300
Dutch.....	2	8,926	5,582	8,998	5,278	6,977.50	13,217
French.....	1	5,020	4,196	6,798	4,263	5,245.00	8,730
German.....	6	30,363	22,378	35,881	22,291	27,972.50	44,147
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,701
Norwegian.....	2	7,561	4,621	7,594	4,636	5,776.25	12,350
Yugoslav.....	1	3,759	3,899	6,361	3,850	4,873.75	9,900
Total.....	21	103,015	77,196	129,167	77,689	96,495.00	143,078
West coast of United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,983	5,710.00	9,560
British.....	6	28,307	22,753	36,882	22,480	28,446.25	50,423
French.....	1	6,907	6,693	9,117	6,732	8,288.40	11,505
German.....	1	4,340	3,762	6,370	3,658	4,702.50	8,160
Japanese.....	2	8,789	8,714	11,721	8,518	10,546.80	15,570
Norwegian.....	6	30,225	25,355	42,137	25,128	31,693.75	55,318
United States.....	3	21,773	16,931	27,240	16,761	21,163.75	36,734
Total.....	20	105,317	88,781	140,605	87,265	110,551.45	187,270
West coast of South America to east coast of United States:							
British.....	5	17,809	14,450	24,495	14,977	\$18,062.50	19,316
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	2,225
Norwegian.....	3	3,774	3,268	5,153	3,003	4,085.00	7,900
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,800
United States.....	10	39,845	29,399	52,025	29,326	36,688.90	44,704
Total.....	20	70,629	45,326	104,320	55,667	67,847.65	95,945

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Cristobal:							
Colombian.....	4	574	554	880	550	\$673.70	373
Dutch.....	1	742	294	780	323	367.50	475
German.....	5	4,532	2,777	5,480	2,890	3,471.25	3,229
Total.....	10	5,848	3,625	7,140	3,763	4,512.45	4,077
Australasia to Europe:							
British.....	8	61,286	46,456	74,928	46,958	58,070.00	47,747
French.....	1	5,633	4,305	7,138	4,380	5,381.25	2,645
Total.....	9	66,919	50,761	82,066	51,338	63,451.25	50,392
Philippine Islands to east coast of United States:							
Danish.....	2	5,949	4,745	7,857	4,785	5,931.25	7,705
Japanese.....	1	5,676	4,655	7,543	4,516	5,818.75	9,353
Panamanian.....	1	6,967	3,963	6,604	4,057	4,953.75	5,407
United States.....	4	24,042	20,206	30,458	20,232	25,257.50	27,930
Total.....	8	42,634	33,569	52,462	33,590	41,961.25	50,395
West coast of Canada to east coast of United States:							
Norwegian.....	1	3,235	2,313	3,924	2,336	2,891.25	4,517
United States.....	5	23,403	17,247	27,963	17,221	21,558.75	27,157
Total.....	6	26,638	19,560	31,887	19,557	24,450.00	31,674
West coast of United States to West Indies:							
Italian.....	1	4,320	3,701	6,468	3,640	4,626.25	7,292
Norwegian.....	2	10,044	8,409	14,189	8,389	10,511.25	18,441
United States.....	1	7,363	7,178	9,621	7,171	8,835.60	13,291
Total.....	4	21,727	19,288	30,278	19,200	23,973.10	39,024
Australasia to east coast of Canada:							
British.....	3	14,047	10,986	17,951	10,985	13,732.50	4,736
West coast of Central America to Cristobal:							
British.....	2	2,322	1,930	3,661	2,061	2,412.50	326
Colombian.....	1	163	164	233	166	123.00	
Total.....	3	2,485	2,094	3,894	2,227	2,535.50	326
Far East to east coast of United States:							
Japanese.....	2	11,043	8,676	14,017	8,497	10,845.00	5,602
Australasia to east coast of United States:							
Norwegian.....	1	4,265	2,495	4,333	2,494	3,118.75	6,982
United States.....	1	5,247	3,825	6,197	3,822	4,781.25	6,218
Total.....	2	9,512	6,320	10,530	6,316	7,900.00	13,200
Balboa to Cristobal:							
Panamanian.....	2	106	106	106	106	127.20	65
West coast of South America to east coast of Canada:							
British.....	1	7,717	6,514	11,941	6,270	8,142.50	16,400
United States.....	1	6,087	5,100	8,212	5,108	6,375.00	11,600
Total.....	2	13,804	11,614	20,153	11,378	14,517.50	28,000
West coast of Canada to east coast of South Amer- ica:							
Norwegian.....	1	5,132	2,912	4,885	3,005	3,640.00	1,769
United States.....	1	5,011	3,623	5,702	3,580	4,528.75	8,220
Total.....	2	10,143	6,535	10,587	6,585	8,168.75	9,989
West coast of United States to Cristobal:							
United States.....	2	4,637	3,781	6,415	3,802	4,726.25	1,030

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Hawaiian Islands to east coast United States:							
United States.....	1	1,740	1,542	2,647	1,542	\$1,927.50	3,280
West coast of South America to Egypt:							
Norwegian.....	1	4,723	2,728	4,624	2,765	3,410.00	8,270
West coast of South America to east coast Central America:							
British.....	1	3,892	3,363	5,582	3,370	2,802.24	.....
Canadian Intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	6,198
Grand total, Sept., 1930..	220	1,086,676	823,905	1,353,509	825,784	1,027,375.50	1,463,993
Grand total, Sept., 1929..	245	1,147,621	870,696	1,436,521	873,097	1,096,211.70	1,686,494
Grand total, Sept., 1928..	234	1,079,420	837,984	1,371,178	840,189	1,049,989.68	1,603,357

"Damsterdijk" Transits Canal.

The new combination passenger and freight motor ship *Damsterdijk*, of the Holland-America Line, operated by the North Pacific Coast Line (joint service of the Holland-America and the Royal Mail Steam Packet Company), transited the Canal from the Atlantic to the Pacific on October 6, 1930, on her initial voyage in the company's service between Europe and the Pacific coast of North America. The new vessel is 490 feet long by 64.6 feet beam, and of 10,220 gross tons, approximately the same dimensions and tonnage as the *Delfdijk*, which was placed in the service the latter part of 1929. At Cristobal the *Damsterdijk* loaded 188 tons of bananas and 40 tons of other cargo for Pacific coast ports.

Other vessels running in this service are the *Lochmonar*, *Lochgoil*, *Lochkatrine*, *Narenta*, *Nebraska*, *Nichteroy*, *Drechtdijk*, *Dinteldijk*, *Eemdijk*, *Kinderdijk*, and *Moerdijk*.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 11, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Conдор.....	Grace Line.....	September 20.	October 3.....	4,142	.....
Santa Barbara.....	Grace Line.....	October 1.....	October 1.....	.....	4
Alkmaar.....	Royal Netherlands S. S. Co.....	October 1.....	October 1.....	152	.....
Acajutla.....	Pacific Steam Navigation Co.....	October 1.....	October 1.....	1	.....
Lompoe.....	C. T. Bowring & Co.....	October 2.....	October 4.....	9,430	.....
Theodore Roosevelt.....	Fred Olsen & Co.....	October 2.....	October 2.....	.....	1
Cauca.....	National Navigation Co.....	October 3.....	October 4.....	.....	47
Pennsylvania.....	Panama-Pacific Line.....	October 3.....	October 3.....	.....	154
La Perla.....	United Fruit Co.....	October 3.....	October 4.....	590	65
Rangitiki.....	New Zealand Shipping Co.....	October 5.....	October 6.....	15	.....
Neches.....	U. S. Government.....	October 6.....	October 7.....	3,142	.....
Santa Inez.....	Grace Line.....	October 7.....	October 7.....	1	54
Venezuela.....	Panama Mail S. S. Co.....	October 7.....	October 8.....	59	3
El Salvador.....	Panama Mail S. S. Co.....	October 7.....	October 8.....	110	.....
Champerico.....	Pacific Steam Navigation Co.....	October 8.....	October 8.....	3	.....
San Jose.....	United Fruit Co.....	October 9.....	October 10.....	183	.....
Swiftlight.....	C. D. Mallory & Co.....	October 10.....	October 12.....	11,000	.....
Tokiwa Maru.....	Nippon Yusen Kaisha.....	October 10.....	October 11.....	231	.....
Apurimac.....	Peruvian Line.....	October 10.....	October 11.....	150	.....
Marie Bakke.....	Scandinavian South Pacific Line.....	October 11.....	October 11.....	38	.....
Torborg.....	Anglo-Saxon Petroleum Co.....	October 11.....	October 13.....	6,956	.....

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, October 11, 1930.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Cleared for sea.	Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Baralt	2	16.50	5	6.05	5	12.40	5	14.15	209.0	33.0	11.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	53	1,183	742
Pacific Cedar	2	4.20	5	6.15	5	13.10	Dutch	Royal Neth. S. S. Co.	399.0	54.7	21.0	Philadelphia, Pa.	Tacoma, Wash.	General	4,309	6,138	4,354
Dwight	3	8.05	5	13.10	5	13.50	American	Titeler Oil Corp.	335.0	56.1	20.1	New York, N. Y.	Los Angeles, Calif.	Ballast	7,441	5,077	7,441
Primo	3	8.05	5	8.45	5	16.04	American	Moore & McCormick	363.5	53.6	13.0	New York, N. Y.	Westminster, B. C.	Ballast	2,881	5,704	4,273
Tai Yin	3	2.40	5	10.25	5	18.05	Norwegian	Barber S. S. Line	461.0	60.0	20.0	New York, N. Y.	Iloilo, P. I.	General	7,492	9,997	7,063
Aniston City	3	10.43	5	11.25	5	18.23	Norwegian	Ishman S. S. Lines	424.2	56.2	24.9	Baltimore, Md.	General, steel	General	6,993	5,450	6,993
Kang City	3	4.00	5	11.45	5	19.19	British	Reardon-Smith Line	400.0	54.3	14.6	Newcastle, Eng.	Vancouver, B. C.	Ballast	3,841	10,267	7,252
Lungker	3	00.20	5	13.05	5	21.00	Norwegian	Anglo-Saxon Pet. Co.	477.0	63.5	16.6	Glasgow, Scotland	Los Angeles, Calif.	General, bananas	5,060	6,623	4,698
Acquworld	3	00.09	5	13.15	5	21.00	German	Humboldt Pet. Line	477.7	64.0	21.0	Baltimore, Md.	Tacoma, Wash.	General	7,720	5,615	7,720
Munmyste	3	11.55	5	13.10	5	21.00	American	Rebfield Oil Co.	429.0	50.2	15.0	Baltimore, Md.	Los Angeles, Calif.	Ballast	4,460	3,090	4,460
Acquworld	6	00.30	6	7.20	6	13.01	American	Co. Nav. Vascogada	359.0	50.0	13.0	Gibraltar	Arica, Chile	Ballast	...	...	...
S-14	6	00.30	6	9.25	6	13.45	Spanish	U. S. Navy	231.0	21.0	...	Cristobal, C. Z.	Balboa, C. Z.	Ballast	...	...	...
S-16	6	00.30	6	9.25	6	16.45	American	U. S. Navy	231.0	21.0	...	Cristobal, C. Z.	Balboa, C. Z.	Ballast	...	...	...
S-15	6	00.30	6	9.25	6	16.52	American	U. S. Navy	231.0	21.0	...	Cristobal, C. Z.	Balboa, C. Z.	Ballast	...	...	...
S-17	6	00.30	6	9.25	6	16.52	American	U. S. Navy	231.0	21.0	...	Cristobal, C. Z.	Balboa, C. Z.	Ballast	...	...	...
Kirkiston	6	7.30	6	11.00	6	18.00	British	Arctics S. S. Co.	280.0	42.0	13.0	Pt. Royal, Jamaica	Puntarenas, C. R.	Ballast	2,167	1,341	2,167
Marmoa	6	11.55	6	12.05	6	18.55	British	Shaw, Savill & Albion	477.7	62.9	19.6	London, England	Vancouver, B. C.	Ballast	11,053	7,895	11,053
Damsterdijk	6	16.10	6	12.45	6	19.58	Dutch	Holland-American Line	490.0	64.6	22.5	Rotterdam, Holland	Vancouver, B. C.	General	3,549	11,721	8,351
William A.	6	15.33	6	15.35	6	22.48	American	Krauss & Co.	395.0	55.0	16.6	Boston, Mass.	Grays Har., Wash.	Ballast	6,993	5,099	6,993
Laurel	6	15.33	6	15.35	6	22.48	American	U. S. Navy	395.0	55.0	16.6	Cristobal, C. Z.	Balboa, C. Z.	Ballast	...	...	...
Herman F.	6	19.30	6	19.55	7	11.07	American	Union Sulphur Co.	409.8	54.2	21.0	New York, N. Y.	Vancouver, B. C.	Sulphur	4,750	6,581	4,781
Sjested	7	8.30	7	8.55	7	12.56	American	Fein Line	376.5	53.1	21.0	New Orleans, La.	Shanghai, China	Cotton	4,275	6,261	4,706
Amahua	7	8.30	7	8.55	7	15.12	Norwegian	Rebfield Oil Co.	370.0	71.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	11,667	8,542	11,667
Santa Inez	7	12.35	7	9.55	7	15.53	American	Grace Line	500.0	53.2	21.0	New York, N. Y.	Tachuan, Chile	General	1,709	6,255	4,016
Venezuela	7	13.55	7	10.00	7	16.26	American	Panama Mail S. S. Co.	389.0	48.7	23.3	New York, N. Y.	San Francisco, Cal.	General	2,710	6,033	4,353
Vergina	7	10.25	7	10.55	7	17.45	American	Amer-Hawaiian Line	491.5	58.2	19.10	Boston, Mass.	Seattle, Wash.	General	2,400	10,491	7,601
City of	7	10.25	7	12.05	7	18.55	British	Amer-Manchurian Line	456.0	58.5	26.0	Philadelphia, Pa.	Shanghai, China	General	4,908	9,037	6,517
Houbaik	7	11.00	7	12.35	7	19.55	Norwegian	Anglo-Saxon Pet. Co.	450.0	61.0	19.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	...	...	...
Sydney	7	11.05	7	13.25	7	21.37	British	Maritime Shipping Co.	406.0	56.0	15.0	Barry, England	Vancouver, B. C.	Ballast	...	...	...
William Penn	7	16.33	7	17.55	8	11.54	British	Rossvick S. S. Co.	439.6	60.2	25.0	New York, N. Y.	Shanghai, China	General, steel	6,445	9,019	6,226
Ellen Glen	7	20.30	8	6.10	8	15.01	American	Tampa Intercean Co.	439.6	60.0	23.0	New Orleans, La.	Manila, P. I.	Gen. cotton, oil	7,557	8,978	6,525
Vesta City	7	23.30	8	6.25	8	15.27	British	Continental Grain Co.	411.0	51.6	15.0	Barry, England	Vancouver, B. C.	Ballast	...	...	...
Walter A.	7	22.00	8	7.15	8	16.00	American	Luckenbach Line	446.5	56.1	23.0	Boston, Mass.	Seattle, Wash.	General	4,027	8,785	6,567
Luckenbach	7	22.00	8	7.15	8	16.00	American	Luckenbach Line	446.5	56.1	23.0	Boston, Mass.	Seattle, Wash.	General	4,027	8,785	6,567

* Motor ship.
 † Submarine.

Amerikaland ²	8	1 05	8	7 40	8	16 58	8	21 25	Swedish	Ore S. S. Corp.	561 0	72 0	21 0	Baltimore, Md.	Cruz Grande, Chile	15 560	4 406
China Arrow ¹	8	7 20	8	8 35	8	17 48	8	19 10	American	Standard Transp. Co.	468 3	62 7	18 0	Boston, Mass.	Los Angeles, Calif.	10 084	7 388
Ambrion	8	11 20	8	11 30	8	18 13	8	19 32	British	R. Chapman & Son	409 6	54 0	17 6	Newcastle, Eng.	Vancouver, B. C.	5 756	4 139
Ambrion	8	00 45	8	12 05	8	19 10	8	20 08	French	French Line	470 1	61 3	19 6	Dunkirk, France	Vancouver, B. C.	1 711	10 332
Navigator	8	14 25	8	14 35	8	21 48	9	23 40	American	Islandia S. S. Lines	424 2	56 2	26 0	Philadelphia, Pa.	Singapore, Straits Settlements	8 238	7 611
Rangitane ²	9	2 00	9	6 10	9	13 20	9	13 20	British	U. Z. Shipping Co.	551 0	70 0	25 0	London, England	Auckland, N. Z.	4 700	18 205
Neches ²	7	14 30	9	6 25	9	14 00	9	15 20	American	U. S. Navy	495 0	55 0	19 10	Cristobal, C. Z.	Balboa, C. Z.	4 700	18 205
Jacob	9	6 25	9	7 00	9	14 24	9	15 40	American	Luckenbach Line	424 0	57 7	21 6	Houston, Texas	Tacoma, Wash.	4 604	7 982
Minerva	9	4 35	9	8 45	9	15 47	9	16 45	Norwegian	H. M. Wrangel	402 0	56 0	22 3	Antwerp, Belgium	Vancouver, B. C.	7 275	7 865
Nevada	8	11 20	9	9 30	9	16 43	9	18 12	French	French Line	420 2	56 2	17 2	Havre, France	Vancouver, B. C.	3 357	7 300
Nosa King	9	13 35	9	11 25	9	18 30	9	19 30	American	N. O. & S. A. S. Co.	420 2	56 2	17 2	Havre, France	Corral, Chile	1 263	3 975
Nelson	8	15 30	9	11 30	9	18 30	9	19 30	British	Nelson Shipping Co.	331 0	42 0	18 3	New Orleans, La.	Vancouver, B. C.	8 357	5 950
Yllwenger ²	9	5 50	9	12 35	9	19 30	9	22 30	Norwegian	Wendell, Larsen & Co.	398 0	59 0	14 6	Greenock, Eng.	Vancouver, B. C.	6 654	6 869
Pacific Ranger	6	11 45	9	13 45	9	21 04	9	22 00	British	Turness, Withly & Co.	335 0	60 0	19 0	Rosario, Arg.	Vancouver, B. C.	1 055	9 725
Paul Shoup ²	9	16 30	9	16 40	10	11 20	10	13 00	American	Tide Water Oil Co.	424 4	58 2	13 0	Glasgow, Scotland	Vancouver, B. C.	7 333	5 182
Leica ²	9	16 25	9	17 15	10	9 30	10	10 45	British	Canadian Lines, Ltd.	300 0	44 0	22 0	New York, N. Y.	Los Angeles, Calif.	4 154	3 333
City of Tokio	9	19 05	10	6 05	10	13 55	10	16 55	British	Ellerman Lines, Ltd.	467 6	59 0	23 0	Demerara, Br. G.	Vancouver, B. C.	2 044	9 080
Broad Arrow ²	10	2 45	10	7 25	10	15 55	10	17 00	British	Standard Oil Co.	445 0	62 0	25 6	New York, N. Y.	Auckland, N. Z.	6 244	9 576
Silverleaf ²	10	9 40	10	10 05	10	16 55	10	18 10	Japanese	Nippon Yusen Kaisha	456 3	62 0	25 6	Providence, R. I.	Panama, Str. Sett.	6 687	8 015
Tatsumo Maru	9	23 05	10	11 30	10	18 58	10	20 31	American	Calmar S. S. Corp.	409 8	54 2	23 4	New York, N. Y.	Kobe, Japan	3 897	7 643
San Lucas	10	7 50	10	12 05	10	20 30	10	21 50	Colombian	National Navigation Co.	116 0	21 0	9 6	Baltimore, Md.	Seattle, Wash.	6 438	6 757
Yokmar	9	21 35	10	13 45	10	21 16	10	22 25	German	North German Lloyd	393 0	54 0	23 9	Cristobal, C. Z.	Buenaventura, Col.	147	211
Caldas ²	9	21 35	10	13 45	10	21 16	10	22 25	German	S. Lavanos	393 0	54 0	23 9	Newcastle, Eng.	Tacabano, Chile	4 804	6 600
Ludwigshafen	10	17 40	11	6 05	11	13 16	11	14 45	Greek	Shaw, Savill & Albion	500 0	63 2	26 11	Newcastle, Eng.	Arica, Chile	4 106	11 811
Fordale	10	19 35	11	7 10	11	14 13	11	15 30	British	Conyon & Sons	390 0	53 0	18 0	Nakskov, Denmark	Los Angeles, Calif.	5 000	6 667
Indien	10	1 35	11	7 10	11	18 15	11	22 32	Danish	Christensen S. S. Co.	409 6	54 2	22 0	Baltimore, Md.	Seattle, Wash.	6 133	6 909
Helen Whittier	11	6 55	11	7 30	11	16 45	11	18 15	American	Kokusai Kisen Kaisha	425 0	54 0	25 0	Boston, Mass.	Yawata, Japan	6 133	6 909
Yuri Maru	11	7 10	11	8 20	11	17 11	11	20 25	Japanese	Redwood Line	400 0	52 0	21 2	Montreal, Canada	Auckland, N. Z.	3 011	5 954
Aldington	11	19 00	11	19 20	12	13 30	12	15 00	American	Redwood Line	381 0	52 2	18 0	Houston, Texas	Tacoma, Wash.	3 259	5 732
Court ²	10	23 05	11	10 09	11	17 33	11	19 53	British	Roll Line, Ltd.	405 0	55 0	13 6	Newcastle, Eng.	Los Angeles, Calif.	200	1 165
Calif.	10	27 05	11	10 25	11	19 00	11	20 33	German	Coast Line, Ltd.	216 5	32 9	12 10	Cristobal, C. Z.	Guayaquil, Ecuador	3 316	6 777
American	11	9 30	11	10 35	11	18 30	11	19 50	American	Amer-Hawaiian Line	404 6	54 0	19 0	Boston, Mass.	Portland, Oreg.	3 675	2 359
San Jose	10	15 10	11	13 10	11	19 40	11	20 35	American	United Fruit Co.	330 0	44 6	16 8	Cristobal, C. Z.	San Francisco, Cal.	3 675	2 359
Napier Star	11	10 30	11	13 20	11	20 21	11	22 30	British	Blue Star Line	476 0	67 0	21 0	Newcastle, Eng.	Seattle, Wash.	3 675	2 359
Canadian	11	10 35	11	14 00	11	21 45	11	23 05	British	Can. Nat. Steamships	400 0	52 0	21 2	Montreal, Canada	Auckland, N. Z.	3 011	5 954
Abcon	11	19 00	11	19 20	12	13 30	12	15 00	American	Redwood Line	381 0	52 2	18 0	Houston, Texas	Tacoma, Wash.	3 259	5 732

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Virgilio ²	30	18 30	5	6 31	5	13 40	5	21 28	Italian	Nav. Gen. Italiana	482 8	61 8	23 0	Talcahuano, Chile	Genoa, Italy	2 338	12 941
Shobutan	5	6 20	5	6 59	5	15 10	5	15 10	American	Redwood Line, Inc.	386 2	52 2	22 0	Seattle, Wash.	New Orleans, La.	3 623	5 708
Chr. Th. Boe ²	5	6 30	5	7 14	5	16 20	5	16 20	Norwegian	Caucasian Oil Co., Ltd.	408 3	55 3	26 0	Los Angeles, Calif.	Avonmouth, Eng.	8 469	6 425
Creole Petroleum	5	11 55	5	19 00	5	19 00	5	19 00	Venezuelan	Creole Petroleum Co.	325 0	55 0	22 0	Balboa, C. Z.	Maracaibo, Venez.	3 497	2 076
Bronxville ²	5	15 30	5	16 58	6	10 50	6	10 50	Norwegian	A. F. Klaveness & Co.	386 3	55 2	25 0	Vancouver, B. C.	New York, N. Y.	7 019	6 715

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Genoa Maru	5	17 40	5	18 21	6	14 40	Japanese	Nippon Yusen Kaisha.	425.0	53.6	24.0	Yokohama, Japan	London, England	General	9,104	6,865	5,073
Ranzitiki ¹	5	11 50	6	6 20	6	13 20	British	N. Z. Shipping Co.	531.0	70.0	29.0	Auckland, N. Z.	London, England	Frozen, dairy	6,194	18,197	3,526
Chifuku Maru	6	8 25	6	10 15	6	13 20	Japanese	Kokusai Kisen Kaisha	385.0	57.0	27.0	Portland, Ore.	Dublin, Ireland	Wheat	7,918	5,919	4,400
Queen Eleanor	6	13 00	6	13 52	6	22 10	British	De Pont de Nemours	400.3	53.3	25.0	Tacopilla, Chile	New Orleans, La	Wheat	7,600	5,808	4,054
Anglo Indian	6	14 00	6	14 40	6	22 25	British	Lawthia, Latia & Co.	426.0	59.5	24.0	Vancouver, B. C.	Faya 7	Nitrate of soda	8,902	7,130	5,322
Dragon ²	6	8 15	6	7 15	7	13 10	British	British Admiralty	445.0	46.0	26.0	Mollendo, Peru	Jamaica, B. W. I.	Wheat	8,902	7,130	5,322
Neches ³	6	6 09	6	6 39	7	14 30	American	U. S. Navy	473.0	46.5	29.0	Los Angeles, Calif	Cristobal, C. Z.	Gasoline	8,373	7,106	5,068
Monique ⁴	6	14 25	7	7 22	7	16 05	French	Cie. Aux. de Navigation	426.0	57.0	27.0	Los Angeles, Calif	Blaye, France	Gasoline	7,505	7,611	5,068
Steel Mariner	6	15 15	7	8 13	7	17 05	American	Isle-Mar S. S. Lines	425.0	56.2	27.0	Vancouver, B. C.	Avonmouth, Eng	General	7,148	6,779	4,921
Kusan	7	8 25	7	8 32	7	18 05	American	Amer-Hawaiian Line	404.6	53.9	26.0	Portland, Ore.	Boston, Mass	General	7,870	6,280	4,722
Brandanger ⁵	7	8 25	7	9 15	7	18 25	Norwegian	Interocean Line	381.1	53.8	26.0	Vancouver, B. C.	Rotterdam, Holl'd	General	7,870	6,280	4,722
Pacific	7	11 00	7	12 03	7	19 10	British	Furness, Withy & Co.	435.9	60.2	27.2	Vancouver, B. C.	London, England	General	8,182	9,630	6,943
Bethore	8	00 45	8	5 55	8	15 55	American	Ore S. S. Corp.	550.3	72.2	35.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	20,669	15,476	4,354
El Salvador	7	9 00	8	6 49	8	13 20	American	Panama Mail S. S. Co.	360.2	51.6	24.0	San Francisco, Cal	New York, N. Y.	General	1,973	5,710	4,011
Dixie Arrow ⁶	7	15 58	8	7 18	8	16 05	American	Standard Transp. Co.	468.3	62.7	27.0	Los Angeles, Calif	New York, N. Y.	Gasoline	11,249	9,744	7,140
Penelope ⁷	7	16 50	8	7 47	8	15 05	Danish	W. Tansschiff Rhederei	470.1	63.2	27.0	Talara, Peru	Hamburg, Germany	Gasoline	11,330	9,302	6,127
Eastern Sun ⁸	8	1 25	8	8 44	8	17 05	American	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif	Philadelphia, Pa.	Gasoline	13,452	9,607	6,551
Santa Cecilia	7	22 15	8	8 53	8	18 20	American	Argonaut S. S. Co.	404.6	53.9	28.0	Seattle, Wash.	Baltimore, Md	Lumber, general	7,260	6,745	4,562
Andrea F.	8	1 20	8	9 40	8	19 20	American	Luckenbach Line	496.0	68.2	31.0	Portland, Ore.	Boston, Mass	Lumber, general	12,076	11,487	8,762
Carlen	8	2 25	8	10 26	8	20 05	Belgium	Compagnie Mar. Belge	471.0	60.8	26.0	Honolulu, T. H.	Rotterdam, Holl'd	General	10,450	8,450	6,472
Aden Maru	8	5 00	8	10 40	8	20 45	Japanese	Kokusai Kisen Kaisha	385.0	51.0	27.1	Vancouver, B. C.	Faya 7	Wheat	7,920	6,203	4,672
Kinderdijk	8	11 10	8	11 48	8	21 29	Dutch	Holland-America Line	469.4	58.4		Vancouver, B. C.	Antwerp, Belgium	General	8,300	8,515	6,050
Pat Doheny ⁹	8	13 45	8	14 26	8	21 25	American	Richfield Oil Co. of Cal.	430.0	59.2	27.0	Los Angeles, Calif	Baltimore, Md	Gasoline	9,082		
Champerico	8	15 00	8	15 39	8	22 30	British	Pacific Steam Nav. Co.	290.1	41.7	15.0	Champerico, Guat	Cristobal, C. Z.	General	254	2,597	1,587
Mauzales	9	7 25	8	8 24	9	15 05	German	Roland Line	216.5	32.9	14.3	Guayaquil, Ecuador	Cristobal, C. Z.	General	911	1,132	741
Tatsuhma	9	8 30	9	9 20	9	16 10	Japanese	Tatsuhma Maru S. S. Co.	423.5	55.6	26.0	Rangoon, India	Nuevitas, Cuba	White rice	7,767	6,793	4,959
Spencer	9	14 10	9	14 41	9	21 45	American	Kellogg S. S. Corp.	391.8	51.3	26.0	Manila, P. I.	New Orleans, La.	Coconut oil	6,400		
Nitro ¹⁰	9	18 30	10	6 16	10	13 40	American	U. S. Navy	463.1	60.1	22.3	Corinto, Nicaragua	Hampton Rds., Va.	Navy general	507		
San Jose	9	15 40	10	6 39	10	15 10	American	United Fruit Co.	330.0	44.6	18.2	San Francisco, Cal	Cristobal, C. Z.	General	388	3,675	2,359
Cedar Branch	10	2 40	10	7 10	10	16 15	British	F. & W. Rison	380.0	51.0	22.0	Corral, Chile	Liverpool, England	General	5,247	4,927	3,597
Vega	8	15 00	10	8 14	10	17 15	American	U. S. Navy	407.7	54.2	18.0	Mar Island, Calif	Hampton Rds., Va.	Mis. naval stores	2,658		
Firemore	10	4 30	10	9 02	10	17 55	American	Ore S. S. Corp.	449.1	57.2	22.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	11,500	7,900	5,238
Point Fernin	10	11 40	10	13 18	10	20 05	American	Swayne & Hoyt	324.0	46.2	22.0	Portland, Ore.	New Orleans, La.	General	3,716	3,984	2,617
Oran	10	12 15	10	13 55	10	22 50	Belgium	Nitrate Association	460.4	58.2	28.0	Ignique, Chile	New Orleans, La.	Nitrates	9,700	9,008	6,211
Veganian	10	16 00	10	17 24	11	11 10	American	Amer-Hawaiian Line	404.0	52.9	27.0	Seattle, Wash.	Alexandria, Egypt	General	6,500	6,754	4,800

¹ Fruits, vegetables, and coffee.² Coffee, wood, and hides.³ 83,300 tons Diesel oil, and 127,000 gallons gasoline.⁴ For orders.⁵ Supply ship.⁶ Cruiser.⁷ Motorship.⁸ Tanker.

Apurimac.....	10	8 40	10 18.00	11 12 55	11 18 10	Peruvian.....	382.0	48.2	21.0	Callao, Peru.....	Jacksonville, Fla.,	Guano, general.	4,057	4,867	3,544
C. O.											New York, N. Y.	Crude oil	20,000	16,780	9,885
Stikman ² 4.	11	8 30	11 7 15	12 13 30	12 14 35	British.....	565.7	75.6	31.0	Talara, Peru.....	Boston, Mass.	General	2,704	7,657	5,346
Tokima Maru	10	20.00	11 10 35	11 17 15	11 19 20	Japanese.....	445.0	58.0	19.0	Manila, P. I.	Liverpool, England	General	6,937	13,137	9,067
Oroya	11	9 40	11 10 46	11 19 05	12 6 35	British.....	525.3	62.8	27.0	Talcahuano, Chile.	Oslo, Norway.....	General	6,068	6,077	4,586
Marie Bakke	11	9 30	11 13 49	11 22 25	12 2 05	Norwegian.....	375.6	52.0	23.0	Corral, Chile.....	New York, N. Y.	General	4,442	10,626	6,080
Santa Maria	11	11 15	11 14 07	11 21 25	12 7 50	American.....	466.0	64.0	25.0	V. paraso, Chile.....					

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 5.	Inapaquina ¹¹ .	A. Tagaropulos	Colon, Rep. of Panama.	October 5.	Inapaquina ¹¹ .	A. Tagaropulos	Colon, Rep. of Panama.
October 5.	Calameres.	United Fruit Co.	Port Limon, Costa Rica.	October 5.	Magallanes	Spanish Line	Barcelona and wayports.
October 5.	No. 9776 ¹² .	Pan American Airways	Miami via wayports.	October 5.	No. 142-M ¹² .	Pan American Airways	Miami via wayports.
October 5.	No. 144-M ¹² .	Pan American Airways	La Guayra and wayports.	October 5.	No. 9664 ¹² .	Pan American Airways	San Salvador and waypts.
October 6.	Casilla.	United Fruit Co.	Puerto Colombia.	October 5.	Magdalena.	Hamburg-American Line.	Hamburg and wayports.
October 6.	Tolosa.	United Fruit Co.	New York via Habana.	October 5.	Calameres.	United Fruit Co.	New York via Habana.
October 6.	Smaland.	J. S. Webster	Kingston, Jamaica.	October 5.	No. 300-N ¹² .	Pan American-Grace Airways.	Talara via wayports.
October 6.	Cordoba C-40 ¹² .	Seadair Airplane Co.	Barraquilla and waypts.	October 6.	Cartago.	United Fruit Co.	New Orleans and waypts.
October 6.	Aneteta I. ¹² .	A. Tagaropulos	Colon, Rep. of Panama.	October 6.	Casilla.	United Fruit Co.	Port Limon, Costa Rica.
October 6.	Arminia Carvaldo ¹² .	United Fruit Co.	Colon, Rep. of Panama.	October 6.	Fernina Carvaldo ¹² .	Ramon Carvaldo.	Bluefields, Nicaragua.
October 6.	No. 9670 ¹² .	Pan American Airways	San Salvador and waypts.	October 6.	Aneteta I. ¹² .	United Fruit Co.	Colon, Rep. of Panama.
October 7.	No. 300-N ¹² .	Pan American-Grace Airways	Talara via wayports.	October 6.	No. 9685 ¹² .	Pan American Airways	San Salvador and waypts.
October 8.	Arcon.	Panama R. R. S. Line.	New York via Haiti.	October 8.	No. 9776 ¹² .	Pan American Airways.	Puerto Cabezas, Nicaragua.
October 8.	Arguani.	Elders & Fyfes Line.	Avonmouth via wayports.	October 8.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.
October 8.	Santa Marta.	United Fruit Co.	Avonmouth via Kingston.	October 8.	Arguani.	Elders & Fyfes Line.	Avonmouth via wayports.
October 8.	Tela.	United Fruit Co.	New Orleans, La.	October 8.	Casilla.	United Fruit Co.	Chiracoo via wayports.
October 8.	No. 9137 ¹² .	Pan American Airways	Miami via wayports.	October 8.	Inapaquina ¹¹ .	A. Tagaropulos	Colon, Rep. of Panama.
October 8.	No. 9664 ¹² .	Pan American Airways	San Salvador and waypts.	October 9.	No. 300-N ¹² .	Pan American-Grace Airways.	Talara via wayports.
October 9.	Inapaquina ¹¹ .	A. Tagaropulos	Colon, Rep. of Panama.	October 9.	No. 144-M ¹² .	Pan American Airways	La Guayra and waypts.
October 9.	Bogota.	Colombian S. S. Line.	New York via wayports.	October 9.	Santa Marta.	United Fruit Co.	New York via wayports.
October 10.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via Habana.	October 9.	Tela.	United Fruit Co.	Bocas, Rep. of Panama.
October 10.	Christian Krogh.	Aluminum Line.	Tampa, Fla.	October 9.	Smaland.	J. S. Webster	Kingston, Jamaica.
October 10.	Tela.	United Fruit Co.	Bocas, Rep. of Panama.	October 9.	No. 9670 ¹² .	Pan American Airways	San Salvador and waypts.
October 11.	No. 300-N ¹² .	Pan American-Grace Airways.	Talara via wayports.	October 10.	Bogota.	Colombian S. S. Line.	New York via wayports.
October 11.	No. 144-M ¹² .	Pan American Airways	La Guayra via wayports.	October 10.	Christian Krogh.	Aluminum Line	Paramaribo and waypts.
October 11.	No. 9685 ¹² .	Pan American Airways	San Salvador and waypts.	October 10.	Cordoba C-40 ¹² .	Seadair Airplane Co.	Barraquilla and waypts.
October 11.	No. 142-M ¹² .	Pan American Airways	Miami via wayports.	October 11.	Atlantida.	Standard Fruit & S. S. Co.	New Orleans and waypts.
October 11.	Nueva Espana ¹² .	Diez & Garcia.	Colon, Rep. of Panama.	October 11.	Tela.	United Fruit Co.	New Orleans and waypts.
				October 11.	No. 9664 ¹² .	Pan American Airways	San Salvador and waypts.
				October 11.	Nueva Espana ¹² .	Diez & Garcia.	Colon, Rep. of Panama.

¹¹ Motor boat. ¹² Air mail carrier.

PORT OF BALBOA.

October 10.	Guardian.	All America Cables, Inc.	Iquique, Chile
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* Other than ships passing through the Canal.

United States Intercoastal Traffic by Commodities for September, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for September, 1930, and the totals for September, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Agricultural implements.....	1,249	27	1,276
Alfalfa.....		3,067	3,067
Alfalfa meal.....		1,054	1,054
Ammonia.....	26	25	51
Asbestos.....	156		156
Asphalt.....	30	275	305
Automobiles.....	3,827	315	4,142
Automobile accessories.....	4,991	174	5,165
Bark.....		7	7
Barley.....	32	50	82
Beans.....	63	2,857	2,920
Borax.....	12	903	915
Bricks.....	197		197
Burlap.....	316	45	361
Calcium carbide.....	70		70
Camphor.....		15	15
Canned goods:			
Fish.....	529	25,006	25,535
Fruit.....	107	41,939	42,046
Meat.....	107	3,320	3,427
Milk.....	40	663	703
Soup.....	2,224	390	2,614
Vegetables.....	455	6,892	7,347
Miscellaneous.....	907	4,726	5,633
Carbon black.....	61		61
Celite filtercel.....		325	325
Cement.....	428		428
Charcoal.....	40	100	140
Chemicals.....	1,319	820	2,139
China and fire clay.....	598	26	624
Coal.....	1,925		1,925
Cocoa.....	101	15	116
Coconuts.....	11	334	345
Coffee.....	261	97	358
Cold storage:			
Beef.....		120	120
Cheese.....		250	250
Eggs.....	11	100	111
Fish.....	32		32
Lard.....	268	10	278
Other.....	421	90	511
Confectionery.....	806		806
Cotton.....	256	1,242	1,498
Cottonseed meal.....		512	512
Drugs.....	1,799	88	1,887
Earthenware.....	37	14	51
Eggs, dried.....		11	11
Explosives.....	19	123	142
Fertilizer.....	588	50	638
Flour.....	226	5,815	6,041
Fruit:			
Dried.....	183	9,873	10,056
Fresh.....	19	707	726
Fuller's earth.....		41	41
Furniture.....	284	52	336
General.....	39,395	19,201	58,596
Glass and glassware.....	1,778	513	2,291
Glue.....	184		184
Granite.....	53		53
Guano.....	500		500
Hair.....		51	51
Hardwoods.....	1,261		1,261
Hay.....		4,077	4,077
Hemp.....		767	767
Honey.....		231	231
Hops.....		69	69

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Infusorial earth.....	22	118	140
Ink.....	26		26
Ivory nuts.....	21		21
Jute.....	20		20
Kapok.....		21	21
Lard substitute.....	1,091		1,091
Leather.....	9		9
Lime.....	14		14
Linoleum.....	785	100	885
Liquors.....	24	123	147
Livestock.....	174		174
Lumber.....	2,306	139,442	141,748
Manufactured goods:			
Iron and steel.....	76,819	1,374	78,193
Machinery.....	6,959	318	7,277
Railroad material.....	5,987		5,987
Tinplate.....	7,387		7,387
Textiles.....	2,276	723	2,999
Miscellaneous.....	4,620	2,133	6,753
Marble.....	90		90
Matches.....	233		233
Metals:			
Copper.....		5,184	5,184
Iron.....	800	1,000	1,800
Lead.....	81	1,441	1,522
Scrap.....	322	728	1,050
Tin.....		90	90
Zinc.....		1,550	1,550
Other.....	50	150	200
Milk, powdered.....	100	871	971
Molasses.....	172		172
Musical instruments.....	17		17
Nitrates.....	30		30
Nuts.....		50	50
Oats.....	107	16	123
Oils:			
Cottonseed.....	518		518
Crude.....	521		521
Gas oil, fuel oil.....	79	34,521	34,600
Gasoline, benzine, naphtha.....	7,959	195,582	203,541
Lubricating and greases.....	7,648	503	8,151
Olive.....	17		17
Vegetable.....	175	53	228
Whale.....		700	700
Wood.....		7	7
Other.....	129	30	159
Ores:			
Copper.....	500	1,351	1,851
Magnesite.....		964	964
Paint.....	669		669
Paper.....	4,349	9,486	13,835
Paper pulp.....	46	10,217	10,263
Paper roofing.....	22	48	70
Peanuts.....	274	85	359
Peas.....		213	213
Phosphates.....	4,312	170	4,482
Porcelain.....	236	622	858
Quicksilver.....		1	1
Rags.....	11	113	124
Rice.....	836	49	885
Rope.....	107	79	186
Rosin.....	485		485
Rubber, manufactured.....	648	92	740
Salt.....	170	69	239
Seeds:			
Grass.....		980	980
Hemp.....		115	115
Other.....	18	247	265
Shells.....	733		733
Silk.....		1,922	1,922
Skins and hides.....		2,167	2,167
Slag.....	859		859
Slate.....	635		635
Soap.....	3,876	395	4,271
Soda.....	254		254
Soda ash.....	1,926		1,926
Soda, bicarbonate.....	105		105
Soda, caustic.....	44		44
Starch.....	75		75
Sugar.....	17	16,650	16,667
Sulphur.....	5,256		5,256
Syrup.....	94	14	108
Tallow.....		169	169
Tar.....	13		13
Tea.....		63	63

	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Tobacco.....	1,332	85	1,417
Toys.....	489	10	499
Turpentine.....	30		30
Vegetables.....	23	165	188
Waste.....	25	181	206
Wax.....	127		127
Wheat.....		196	196
Wine.....		55	55
Wool.....	12	1,922	1,934
Total, September, 1930.....	224,391	573,197	797,588
Total, September, 1929.....	261,679	623,024	884,703
Total, September, 1928.....	242,952	603,846	846,798

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 11, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Baralt.....	Royal Netherlands S. S. Co.....		October 5.....		53
Magdalena.....	Hamburg-American Line.....		October 5.....		435
Cartago.....	United Fruit Co.....		October 5.....		102
Caldas.....	National Navigation Co.....		October 10.....		147
Cali.....	North German Lloyd.....		October 11.....		236
Calamarcas.....	United Fruit Co.....	October 5.....	October 5.....	31	738
Vancouver.....	Hamburg-American Line.....	October 5.....	October 5.....	37	339
Virgilio.....	Italian S. S. Line.....	October 5.....	October 5.....	35	304
Tai Yin.....	Barber S. S. Line.....	October 5.....	October 5.....	(¹)	2
Damsterdijk.....	Pacific Steam Navigation Co.....	October 5.....	October 6.....	79	228
Arkansas.....	French S. S. Line.....	October 5.....	October 6.....	634	(²)
Venezuela.....	Panama Mail S. S. Co.....	October 5.....	October 7.....	259	631
Castilla.....	United Fruit Co.....	October 6.....	October 6.....	23	15
Santa Inez.....	Grace Line.....	October 6.....	October 7.....	27	206
Tolosa.....	United Fruit Co.....	October 6.....	October 8.....	689	1
Pacific Ranger.....	Furness, Withy & Co.....	October 6.....	October 9.....	(¹)	265
Nosa King.....	N. O. & S. A. S. S. Co.....	October 7.....	October 9.....	539	139
Ancon.....	Panama R. R. S. S. Line.....	October 8.....	October 9.....	3,207	
Champerico.....	Pacific Steam Navigation Co.....	October 8.....	October 8.....	254	
Kinderdyk.....	Pacific Steam Navigation Co.....	October 8.....	October 8.....	(¹)	161
Oregon.....	French S. S. Line.....	October 8.....	October 8.....	47	115
Santa Marta.....	United Fruit Co.....	October 8.....	October 9.....	351	300
El Salvador.....	Panama Mail S. S. Co.....	October 8.....	October 9.....	516	199
Tela.....	United Fruit Co.....	October 8.....	October 9.....	942	74
Manizales.....	North German Lloyd.....	October 9.....	October 9.....	911	
Nevada.....	French S. S. Line.....	October 9.....	October 9.....	25	(²)
Villanger.....	Westfal, Larsen & Co.....	October 9.....	October 9.....	63	(²)
Ludwigshafen.....	North German Lloyd.....	October 9.....	October 10.....	206	26
San Lucas.....	Quaker Line.....	October 10.....	October 10.....	82	(²)
Bogota.....	United Fruit Co.....	October 10.....	October 10.....	120	45
Christian Krohg.....	Aluminium Line.....	October 10.....	October 10.....	369	(²)
Apurimac.....	Peruvian Line.....	October 10.....	October 10.....	58	(²)
San Jose.....	United Fruit Co.....	October 10.....	October 11.....	574	(²)
Atlantida.....	Standard Fruit & S. S. Co.....	October 10.....	October 11.....	190	370
Ebro.....	Pacific Steam Navigation Co.....	October 11.....	October 11.....	64	
Oroya.....	Pacific Steam Navigation Co.....	October 11.....	October 11.....	18	
Tela.....	United Fruit Co.....	October 11.....	October 11.....	90	140
Takiwa Maru.....	Nippon Yusen Kaisha.....	October 11.....	October 11.....	100	(²)
Santa Maria.....	Grace Line.....	October 11.....	October 11.....	(¹)	192

¹ No cargo discharged.

² No cargo laded.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 9, 1930.

No. 776.

Panama, west coast, Burica Islet, light established. The following is quoted from Notice to Aviators No. 10, Washington, D. C., September 15, 1930:

A flashing white light, period 1 second, has been established on Burica Islet, off Burica Point, Panama. The light is exhibited 105 feet above high water. Approximate position: Lat. 8° 02' 00" N., long. 82° 53' 32" W.

H. BURGESS,
Governor.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., October 22, 1930. No. 12.

Classification of Cargo Passing Through the Panama Canal, Showing Origin and Destination, During Fiscal Year Ended June 30, 1930.

A statement of all commodities passing through the Panama Canal, showing origin and destination, during the fiscal year ended June 30, 1930, is shown in Tables I and II on pages 152 to 163 of this issue. From the cargo declarations submitted by masters of vessels it has been possible to classify over 87 per cent of the cargo passing from the Atlantic to the Pacific during the year, and almost 99 per cent of that passing from the Pacific to the Atlantic.

PRINCIPAL COMMODITIES—ATLANTIC TO PACIFIC.

Commodities shipped to the Pacific which aggregated more than 100,000 tons in any of the past four fiscal years are listed in the following tabulation:

Commodity.	Fiscal year ended June 30—			
	1927.	1928.	1929.	1930.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Manufactures of iron and steel.....	1,971,964	1,855,532	2,349,566	2,128,712
Mineral oils.....	649,379	717,083	806,744	682,742
Phosphates.....	183,521	198,826	281,168	435,994
Cement.....	222,817	280,032	379,968	412,347
Tinplate.....	194,111	143,610	261,899	294,382
Paper.....	150,722	183,263	224,276	259,314
Cotton.....	361,241	259,225	331,652	248,345
Coal and coke.....	186,522	252,740	227,833	224,439
Sulphur.....	211,625	207,257	233,231	215,831
Automobiles (exclusive of accessories).....	127,882	124,553	259,688	203,089
Scrap metal.....	23,354	48,163	83,829	196,676
Railroad material.....	189,858	188,561	239,074	194,578
Machinery.....	172,150	215,334	188,442	180,805
Ammonia.....	134,977	91,776	108,862	153,437
Textiles.....	91,967	124,658	137,886	120,750
Canned goods (fish, fruit, vegetables, etc.).....	44,192	87,136	121,472	120,373
Tobacco.....	81,457	78,943	129,433	118,322
Sugar.....	282,912	44,951	150,402	101,150
All other.....	3,302,676	3,208,489	3,371,045	3,184,429
Total.....	8,583,327	8,310,134	9,882,520	9,475,725

Total cargo from the Atlantic to the Pacific during the year showed a decrease of 406,795 tons as compared with the fiscal year 1929 (which established the high record for a year's cargo tonnage passing through the Canal from the Atlantic to the Pacific) but was 1,165,591 tons higher than in the fiscal year 1928. Of the 18 commodities shown in the foregoing tabulation, 12 show decreases and 6 increases. Manufactures of iron and steel, the commodity of the heaviest tonnage from the Atlantic to Pacific, most of which was in the U. S. intercoastal trade, decreased 220,854 tons. The commodity showing the largest increase was phosphates, shipments of which were 154,826 tons greater than in 1929, a gain of 55 per cent, largely in the trade from the east coast of the United States to the Far East. The commodity showing the second largest increase was scrap metal, shipments of which were 112,847 tons greater than in 1929, a gain of more than 135 per cent. The scrap was carried mostly over the route from the United States to the Far East. The gains shown in other commodities were unimportant in volume.

The effects of the world-wide business depression are well illustrated by the decline in shipments of the following commodities, covering a wide scope of business activity. For each commodity is shown the loss in tons from the previous year: Manufactures of iron and steel, 220,854; mineral oils, 124,002; cotton, 83,307; sugar, 49,252; automobiles, 47,599; railroad material, 44,496; sulphur, 22,400.

The five other principal commodities showing declines were less than 20,000 tons under shipments in 1929.

PACIFIC TO ATLANTIC.

The principal commodities shipped to the Atlantic which aggregated more than 100,000 tons in any of the past four fiscal years are listed in the following tabulation:

PACIFIC TO ATLANTIC.

	Fiscal year ended June 30—			
	1927.	1928.	1929.	1930.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Mineral oils.....	7,143,165	5,619,076	5,197,813	5,700,587
Lumber.....	3,139,113	3,673,832	3,311,875	3,530,879
Ores (principally iron).....	1,648,862	1,600,483	1,750,548	2,229,470
Nitrate.....	1,174,384	2,565,572	2,554,565	1,910,793
Wheat.....	1,477,376	3,035,884	2,365,555	1,503,035
Sugar.....	427,035	577,781	717,931	920,399
Canned goods (fish, fruit, vegetables, etc.).....	714,696	771,793	921,217	806,365
Metals, various.....	508,807	626,683	671,500	666,057
Food products in cold storage *.....	245,520	238,952	315,675	335,061
Barley.....	344,341	237,262	260,142	275,064
Fruit, dried.....	200,433	272,644	304,956	206,384
Wool.....	129,906	167,931	150,712	145,071
Fruit, fresh.....	97,969	93,457	211,854	144,880
Beans.....	73,569	127,168	154,782	112,679
Copra.....	81,685	83,143	119,586	109,172
Pulp.....	3,099	14,734	49,623	108,861
Flour.....	90,938	112,191	110,183	103,486
Cotton.....	107,311	95,724	109,825	103,408
Coffee.....	113,313	132,862	136,369	102,646
Paper.....	23,549	49,657	62,191	101,422
All other.....	1,419,767	1,173,746	1,303,584	1,438,783
Total.....	19,164,888	21,320,575	20,780,486	20,554,507

* Does not include fresh fruit.

For the second successive year, the Pacific to Atlantic cargo movement declined, the decrease in 1930 amounting to 225,979 tons under 1929 shipments, and 766,068 tons under 1928, in which fiscal year the high record for cargo tonnage passing through the Canal from the Pacific to the Atlantic was established.

Of the 20 commodities shown in the foregoing tabulation, 12 show decreases and 8 increases. Shipments of the three items of heaviest tonnage, mineral oils, lumber, and ores (principally iron), all showed increases, amounting to 502,774 tons, 219,004 tons, and 478,922 tons, respectively. Other commodities showing important increases over the 1929 shipments were sugar, pulp, and paper, with gains of 202,468 tons, 59,238 tons, and 39,231 tons, respectively.

The largest decreases occurred in shipments of wheat and nitrates, which showed losses of 862,520 tons and 643,772 tons, respectively. Five other commodities (coffee, beans, dried fruit, fresh fruit, and canned goods) showed losses ranging from 34,000 to 115,000 tons compared with the 1929 shipments. The routes most affected by the decrease in wheat shipments were from the west coast of Canada and United States to Europe. Decreases in the nitrate shipments occurred largely in the movements from the west coast of South America to Europe and the United States.

CARGO FROM THE ATLANTIC TO PACIFIC—ORIGIN AND DESTINATION.

During the fiscal year 1930, 65.5 per cent of the cargo passing through the Canal Pacific-bound originated on the eastern and Gulf seabords

of the United States, and 25.8 per cent in Europe. During the past four fiscal years these areas have contributed over 90 per cent of the cargo moving in this direction.

Four areas absorbed all of the cargo in this direction, as follows: West coast of North America, 49 per cent; Asia, 22.3 per cent; Australasia, 13.7 per cent; and South America, 15.0 per cent.

The following graphs and figures show the tonnage and percentage of total from and to the principal regions, or origin and destination, for the fiscal year 1930, together with the percentages for the fiscal years 1929, 1928, and 1927:

		Long tons.	Percent of total—			
		1930.	1930.	1929.	1928.	1927.
<i>Origin:</i>						
United States		6,203,780	65.5	66.2	64.1	67.4
Europe		2,451,778	25.8	24.1	25.6	22.1
All other		820,167	8.7	9.7	10.3	10.5
<i>Destination:</i>						
North America		4,643,846	49.0	48.6	49.3	48.0
Asia		2,117,019	22.3	22.2	20.6	21.6
Australasia		1,288,289	13.7	14.7	15.6	17.7
South America		1,426,571	15.0	14.5	14.5	12.7

CARGO FROM THE PACIFIC TO ATLANTIC—ORIGIN AND DESTINATION.

During the fiscal year 1930 four regions furnished the total cargo tonnage from the Pacific to the Atlantic through the Canal, as follows: West coast of North America, 65.3 per cent; west coast of South America, 26.2 per cent; Australasia, 4.4 per cent; and Asia, 4.1 per cent.

Approximately 60 per cent of the cargo Atlantic-bound through the Canal in the fiscal year 1930 was destined to the eastern seaboard of the United States, and 36.8 per cent to Europe. These two regions have absorbed over 92 per cent of the Atlantic-bound cargo during the past four fiscal years.

The following graphs and figures show the tonnage and percentage of the total from and to the principal regions, or origin and destination, for the fiscal year 1930, together with the percentages for the fiscal years 1929, 1928, and 1927:

		Long tons.	Percent of total—			
		1930.	1930.	1929.	1928.	1927.
<i>Origin:</i>						
North America		13,082,391	63.6	63.8	69.0	71.6
South America		5,671,970	27.6	29.0	25.5	23.1
Australasia		868,712	4.2	3.6	3.2	3.0
Asia		931,434	4.6	3.6	2.3	2.3
<i>Destination:</i>						
United States		11,933,325	58.3	54.1	54.0	60.0
Europe		7,312,674	35.6	39.5	36.4	29.4
All other		1,258,508	6.1	6.4	9.6	10.6

TOTAL CARGO.

Total cargo in long tons through the Canal during the past four years has been: 1930, 30,030,232; 1929, 30,663,006; 1928, 29,630,709; and 1927, 27,748,215. The cargo in the past fiscal year was less by 632,774 tons or about 2 per cent than that in the fiscal year 1930, which was the greatest quantity in any fiscal or calendar year to date.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian intercoastal.
Airplanes.....	23	21	108			32	43	
Agricultural implements.....	15,559	40	5,134	29	15,383	667	3,013	647
Alfalfa.....	40				3,267			
Ammonia.....	2,003			32,727	850	12,513	99,549	15
Ammunition.....	156				5			2
Asbestos.....	2,641		137					4,991
Asphalt.....	4,342	5	4,367		12,190	72	8,675	698
Automobiles.....	39,783	495	23,074	189	65,080	4,867	30,662	14
Automobile accessories.....	18,316	339	7,888	45	25,294	2,071	16,232	3
Bananas.....								
Bark:								
Quebracho.....								
Other.....	502							
Barley.....	151		8					
Beans.....	524		35		24			
Blood and tankage.....	23							
Bones and bone meal.....	150		65				58	
Borax.....	725					49		
Bran.....								
Bricks.....	2,622		4,054		1,271	102	324	
Burlap.....	3,258	17	3,541			16		
Calcium carbide.....	997	62	47		49	273		35
Canned goods:								
Fish.....	4,234		32		60		20	277
Fruit.....	6,623		37		85	15	212	751
Meat.....	1,391		126	2	200	57	11	118
Milk.....	263		2,493			311	228	50
Soup.....	25,311		3	54	23	16	2	12
Vegetables.....	9,206		74	4	175	59	121	55
Miscellaneous.....	27,260	513	2,540	2	3,082	1,350	898	2,746
Carbon black.....	1,334				17	28	2,663	
Celite filtercel.....	215							
Cement.....	9,284		6,438	64	995	145	1,058	
Chalk.....						40		
Charcoal.....	1,790		1,467				39	
Chemicals.....	23,901	269	4,851	48	910	730	11,026	60
China and fire clay.....	2,518		232		15	80	165	
Coal.....	30,134	6,610	17,766					
Cocoa.....	682		32		1,055	70	177	16
Coconuts.....	162							
Coffee.....	1,956				2	2	13	
Coke.....	9,162		2,134					
Cold storage:								
Butter.....	85		27					
Cheese.....	475		231					
Eggs.....			17					
Fish.....	213			53			255	
Lard.....	2,312	70	3,910			2	3	
Meat.....	437		108			13		
Other.....	1,787		94			12	155	
Confectionery.....	10,256	3	8	4	20	89	152	30
Copra.....	544							
Cork.....	1,589							
Corn.....	156		5		3		308	
Cotton.....	3,622	40	293			104	243,399	
Cottonseed oil cake.....	35							
Crescote.....								
Cyanide.....	1,158	75			382	20	1,307	29
Drugs.....	15,110	374	208	36	101	15	246	310
Dyes.....	53				35	41	6,904	
Dyewoods.....	450						161	
Earthenware.....	2,558	13	159	6			21	
Explosives.....	909	15	374		218	38	314	5
Extract quebracho.....								
Fertilizer.....	3,448	102	59			2,437	4,610	
Flour.....	1,989		2,340		847	2,085	36,265	100
Fruit:								
Dried.....	941		18				400	
Fresh.....	564		116					
Fuller's earth.....	3,283							
Furniture.....	6,978	72	93	83		47	50	1,095

¹ East coast Central America to west coast South America, 6,582 tons; east coast Central America to Australasia, 55,113 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.

PACIFIC.

(Figures represent tons of 2,240 pounds.)

East coast—Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West Indies to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
1,771			50			3	74	599	3,273	5,265	10	294
	58					194	166		204	1,608	3,608	51,517
377							16		415	47		3,365
	89		405	2	230	23	3		978	3,933	61,695	153,437
17,967		22	1,348	7,859		53	120	14	1,639	9,837	47	8,631
9,964		21	38	93			2		1,004	2,853		97,712
		23,299									6,203	203,089
												84,213
	25											29,502
		4										25
		250				173	33		57	10		506
2,072		82		2					66	272	7	226
9,343		61				7,782	241				112	1,336
5,817								30		174		2,230
			68	22		3,698	640	1,040	3,153			19,513
47			11				10		150			1,039
258			5			20		22	6,343	114		5,891
												17,621
785		4	100	861		1,539	339	29	1,614	1,805	22	7,030
30			125	13		534	67		329	384	20	8,225
	6,440		52	2					135	560	1,978	11,721
			77	76					1,450	203	8	9,225
				7						5		5,159
1,226	17		265	355		223	62	49	317	100		25,663
						500	380	37	3,353	2,546		10,445
						45						47,077
18												4,087
55			796	730		71,397	6,397	27,584	257,022	9,724	20,658	233
						10,292	413	12	331	10		412,347
												11,098
77		160	17	60		15,514	2,824	1,428	9,892	10,540	458	3,745
						10,581	54		90	22		82,417
				83		6,611		30	58,265	15,471	6,000	13,757
182	3,342	933	19	178	263	154	51		12	54	196	140,970
		453	6								12	7,466
	40,090	14,731		410		758	545		3	266	1,327	633
				21		60,010	1,599		6,683	3,760	103	60,103
												83,469
			3	14					62			191
	411			5		1,373	24	22	401	6	60	3,013
												17
						241	18			38		850
			82	916		10	10		134	30	4	7,433
	86							10				702
		31		89		259	68		54		22	2,579
106				4		357	105			25	30	11,150
												544
									15	50		5,003
	3,418					2,463	886					21,754
				28		286			186		17,364	248,345
				107		690	25		65			35
						64,844						64,844
			83			154	35					3,243
89		41		4	116	463	1,079	4	551	239	48	19,037
						336	69		32			7,470
60				2		1,305	1,749	12	691	841		661
			21				121		2,123	911	24	7,417
	524											5,073
	865					3,093	45	302	1,810	2,810	3,293	3,817
235			376	4,274		79	23		573	342	86	19,581
												49,614
52	3			3	10	631	843		181	418	33	3,533
						91	59	16		43	55	944
						434	24					3,791
4		2	104	11		224	178		9		10	8,960

* Includes 20,636 tons Europe to Balboa.

* East coast South America to west coast Canada.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian intercoastal.
General.....	578,672	5,159	44,499	13,759	44,440	15,944	75,079	12,048
Glass and glassware.....	24,886	129	1,992	46	597	327	579	504
Glue.....	258						60	
Granite.....	546						22	
Graphite.....	117				14			
Guano.....	27			1,880			7,560	
Hair.....	213							
Hardwoods.....	9,377		161		121	185	214	
Hats.....	5							
Hemp.....	366							10
Horns and hoofs.....								
Indigo.....							1,781	
Infusorial earth.....							65	
Ink.....	141		68		154	23	168	20
Ivory nuts.....								
Jute.....	713		177					
Lard substitute.....	9,457							12
Leather.....	23		3					33
Lime.....	508		398			50		10
Linoleum.....	9,276				169		24	
Liquors.....	1,274					6	503	
Livestock.....			5		15		100	
Lumber.....	31,568		5,384	135	315	328	586	20
Malt.....	1,575		158					
Manufactured goods:								
Iron and steel.....	1,231,971	4,983	92,023	13,619	20,848	59,674	180,081	6,312
Machinery.....	48,713	754	21,579	971	14,496	5,447	21,926	459
Railroad material.....	53,620	2,130	39,221	114	615	9,107	26,386	1,299
Tinplate.....	140,604	33	9,465	29,287	4	4,321	83,145	40
Textiles.....	41,544	882	9,929	225	2,019	5,453	1,969	580
Miscellaneous.....	97,427	458	6,106	1,606	5,880	3,938	10,379	558
Marble.....	1,648	44					22	
Matches.....	1,469	106						
Metals:								
Antimony.....			11				50	
Chrome.....	30							
Copper.....	2,761		32		30	50	130	
Gold and silver.....	14						1,354	
Iron.....	30,872		2,607		898	152	18,310	328
Lead.....	359		318		16		824	
Scrap.....	5,541		2,516		2		185,248	
Tin.....	77		606				567	
Zinc.....	260		546		4	16	52	
Other.....	575		29				1,630	2,741
Milk, powdered.....	2,092		609			206	173	
Molasses.....	1,851							
Musical instruments.....	228		24		54			35
Nitrates.....	1,933						769	
Nuts.....	191							20
Oats.....	747		431			49	173	
Oil:								
Coconut.....							18	
Cottonseed.....	1,388		76				33	
Crude.....	27,785		61		350		4	
Gas and fuel oil.....	202		41		1,359		17	
Gasoline, benzine, and naphtha.....	518		5,123		16,825	24	6,353	
Kerosene.....	101		905		25,281	22,765	238,008	
Linseed.....	2,692							
Lubricating and greases.....	70,261	462	16,831	114	50,207	4,279	61,042	15
Olive.....	365			9				
Vegetable.....	3,773		241		81		319	25
Wood.....	343		22					
Other.....	1,112		32			122		
Ore:								
Antimony.....								
Chrome.....	540							
Copper.....	5,190							
Gold and silver.....							54	
Iron.....	68			15			1,000	
Lead.....								

* East coast South America to west coast Canada, 12,211 tons; West Indies to west coast South America, 12,300 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

PACIFIC.—Continued.

(Figures represent tons of 2,240 pounds.)

East coast Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West Indies to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
3,995 31	4,169	1,098	71,177 50	42,171 24	83	47,271 11,538 43 815	26,610 4,944 76 125	7,056 388	100,577 11,595	85,581 10,397	5,634 35	1,185,022 68,062 437 1,668 131 13,125 575 10,558 209 572 116 1,784 129 576 61 5,635 9,494 50 4,260 9,591 23,414 762 48,819 3,527
	3,458 52					200 310 39				160		
45		151					7		76 29	155 151	27	
						107	42	39	8		106	
				3 43		10		11				
	24	21		74		284	155	115	4,103 25	14	16	
						2,615 18			177		502	
27 3		14	278	45		190	5,803	621	4,214 246	8,612 27	1,827 307	
	35		104	469		122	27	152	1,015 1,388	7,695	1,200 105	
27,962 334		17	1,306 458 32	967 397 253 27		128,759 2,294 1,448 7	50,898 2,294 436 8,649	4,202 2,307 3,960 120	163,087 25,847 27,132 3,655	131,400 32,041 28,292 10,025	10,620 26 533	2,128,712 180,805 194,578 294,382
58 1,321			1,143 86	300 281 43	45	2,490 2,083 3,997 122	986 2,143 143	481 1,803	28,715 16,350 990 431	23,812 15,590	119 272	120,750 166,077 6,887 3,057
								268		638	23	
												61 30
7							4		554	501		4,069 1,368
				84		10,307	2,992	620	6,026 932	3,507 1,305	2,950	76,703 6,718
				26			14		36 24	333 299	3,000	196,676 1,573
						8	29		505 27	50 115		1,496 5,295
							5		350	29		3,455
55				1							10	1,861 429
	382 175		6 4			15,305 557	2,022 139	418	452	1,905	3,193 114	26,003 1,403
				103					227		2,024	3,933
				12								30
			2				11	20	332 14 29	52	24,511 573,043	1,831 52,808 74,691
			50	643 122		74	6		99 11	18 278	14,994 10,084	44,727 297,585
			58	115 23 15		446 5,557 1,588 22 880	1,129 87 472	8 150 3	1,394 3,698 2,567 6,939	377 2,567 439	4,708 1,599 23	212,931 8,781 13,895 551 2,911
100							110		523	132		
	20											20 540 8,331 54 2,623 3,500
						3,141						
						1,274	171			95		
												3,500

* East coast South America to west coast South America, 8,530 tons; West Indies to west coast South America, 48,375 tons; east coast Central America to west coast South America, 3,854 tons; West Indies to Australasia, 12,284 tons.

Table I.—Classification of Cargo Passing Through the Panama Canal

ATLANTIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States interoceanal.	East coast United States to west coast Central America.	East coast United States to west coast South America.	East coast United States to Hawaiian Islands.	East coast United States to Australasia.	East coast United States to Philippine Islands.	East coast United States to Far East.	Canadian interoceanal.
Ore—Continued:								
Magnesite.....	18		1,069					
Manganese.....	894				40		11	
Tin.....	33						1,500	
Zinc.....	40	11				1	3,331	
Other.....	214							
Paint.....	8,118	32	418	2	163	69	334	387
Paper.....	72,454	621	1,899	2,272	3,126	1,631	13,993	1,199
Paper pulp.....	216		5		136	12	1,343	
Paper roofing.....	419		35		17		85	289
Patent fuel.....			206					
Peanuts.....	2,964							
Peas.....	154							
Phosphates.....	23,045		136	1,885	42	8,711	309,077	
Plaster.....	37		37		444		75	
Porcelain.....	1,381	15	290	10	45	11		56
Potash.....	5							
Quicksilver.....								
Rags.....	544					92	120	
Rice.....	6,414		2,640				30	
Rope.....	2,351		82	11				
Rtein.....	10,537	40	1,850			25	25,021	
Rubber:								
Manufactured.....	13,933	38	2,566	19	2,991	204	579	
Raw.....	249						20	
Scrap.....					64			
Salt.....	2,696					10	18	115
Sand.....	3,696		810				22	
Seeds:								
Canary.....	69							
Cotton.....	12		10		4	25	12	
Flax.....								
Grass.....	46				20			
Other.....	231						92	
Shells.....	15,015						50	
Silk.....			15		1			
Silversand.....								
Skins and hides.....	79		13				55	
Slag.....	11,675							
Slate.....	6,086				35			
Soap.....	28,865		192	35	14	2,648	149	
Soda.....	5,273	89	115		28	113	333	
Soda ash.....	19,517		155			40	542	
Soda bicarbonate.....	2,144		29			85	1,030	
Soda, caustic.....	3,833	134	318			576	11,042	
Starch.....	969	23	399	10	43	173	489	60
Sugar.....	581		1,098	5	785		1,698	
Sulphur.....	115,137		56	1,355	82,733		6	
Syrup.....	2,285		267			195		70
Talc.....	60							
Tallow.....			15				16	
Tar.....	11,890				7	2		
Tea.....	125		20				5	75
Tobacco.....	25,526		105		14,416	362	72,679	131
Toys.....	1,077				10			
Turpentine.....	1,059		413		924	5	294	
Vegetables.....	135		1					
Waste.....	1,272		65					30
Wax.....	1,326	151	4,543		303	149	17,664	
Wheat.....	60		826				33,086	
Wine.....	163		442				59	
Wool.....	201							
Zinc oxide.....	615				19		25	
Total.....	3,161,530	25,470	378,101	199,731	422,839	176,114	1,896,397	39,495

* Africa to Australasia, 20,617 tons; Africa to Far East, 23,021 tons; east coast United States to west coast Canada, 1,100 tons.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

PACIFIC.—Continued.

(Figures represent tons of 2,240 pounds.)

East coast Canada to Australasia.	East coast South America to west coast United States.	Cristobal to west coast United States.	Cristobal to west coast Central America.	Cristobal to west coast South America.	West Indies to west coast United States.	Europe to west coast United States.	Europe to west coast Canada.	Europe to west coast of Central America.	Europe to west coast South America.	Europe to Australasia.	Miscellaneous.	Total.
						10	10					1,093
						7,314	4		25	11		8,209
						12					3,850	1,533
						7,826	53			1,113	14	7,245
44						72	405	8	1,557	2,525	5	9,220
46,715			171	130		42,656	915	1,154	38,767	22,894	8,617	14,159
						12,908			959	7,464		259,314
						144		13,000	23,951			23,043
				5								845
		200				89	39					37,301
				5		2,000	385	574	2,320	43,076	644,738	2,969
5,036									64			482
				19		677	346	47	2,342	1,113		435,994
						6,931	308		418	152	11,193	5,693
	53			1								6,452
						6,198						19,007
			70	4,001		880		20	13,136			1
						29	76		739			7,007
			146	82		56			693		1,243	27,191
1,233				12		39	33		239	1,293		3,290
									9			39,693
1,537						13,502	4,756		227	24,619	6,937	22,279
						16,420	110					278
	1,151					14			57		11	99
5												54,327
	3,311					253	26		3			20,968
55	15					2,058	83		5	38		1,302
3	2,339			8		30				426		68
				86		509			84		1,567	3,314
						62,037	300			199		453
						37			40	15	1,396	5,248
	199	1				182	23		4,172	43,048		16,748
				321		68	59	65	454	93	75	16,789
				5					606	100	21	62,337
				5		53			917	418		1,835
							309		547			66,945
									896			6,408
				18	146	1,026			737			32,773
				179	27	963			564	245	71,434	6,674
				15		15		114				21,624
						50						3,888
					2	40	23					17,372
				23								4,007
						107	9					101,150
						191	79			3	85	215,331
				259					2,828			2,867
				9	52				178	4,485	358	190
						299	124			51		60
				11						48	145	12,221
	2	29				219	213					3,583
						157						118,322
						12						1,561
				84	1,410							2,810
					105							927
					381							1,530
					2							28,242
						206	440	676				34,133
							4	9	3,149	2,945	779	9,344
						100	189		132	6	494	845
122,037	87,935	41,677	79,598	69,616	24,429	698,479	139,747	69,728	381,666	604,265	455,821	9,475,725

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian intercoastal.	West coast Canada to West Indies.
Airplanes.....	86	21						
Agricultural implements.....	1,074	14	103	30	5,495			
Alfalfa.....	3,937		21		149			
Alfalfa meal.....	5,364				184			
Asphalt.....	943	658	26	75	55,218			
Automobiles.....	1,311	11	53	10	91		2	
Automobile accessories.....	599	3	40		5			
Balsam.....								
Bamboo.....	83							
Bananas.....								
Bark:								
Cascara.....	169				101			
Peruvian.....								
Quillay.....								
Other.....	1,750							
Barley.....	913			479	231,491			
Beans.....	55,916	100	554	6,598			2	
Beeswax.....								
Blood and tannage.....								
Bones and bonemeal.....	101							
Borax.....	11,136	102	38	30	79,800			
Bran.....	137							
Bricks.....	55	30						
Burlap.....	812							
Camphor.....	823							
Canned goods:								
Fish.....	124,787	1,349	2,214	1,232	34,263	50	3,494	1,574
Fruit.....	276,779	302	1,649	2,483	121,876	3	3,361	
Meat.....	1,586		45		11		9	3
Milk.....	4,679		2,153	144				
Soup.....	259		37		154			
Vegetables.....	65,342	53	1,113	899	3,142		1	98
Miscellaneous.....	82,243	195	1,860	2,294	23,102		563	66
Carbon black.....	532							
Celite filtercel.....	6,031	25			2,038			
Cement.....	405	48	339	157				
Charcoal.....	437							
Chemicals.....	9,478	106			469			
China and fireclay.....	274		43		1,100			
Coal.....								
Cocoa.....	533				41			
Cocoa leaves.....	60							
Coconuts.....	3,101				4			
Coffee.....	1,736		388	116	1,001		2	
Coke.....								
Cold storage:								
Beef.....	19				4			
Butter.....	513		143					
Cheese.....	548							
Eggs.....	1,175	614	602	40				
Fish.....	154	38			2,984			
Lard.....	179		330	215	588			
Meat.....	125							
Mutton.....	37							
Other.....	827	25	355	15	143			
Confectionery.....	19	3	2					
Copra.....	1,089				16,987			
Corn.....					700			
Cotton.....	27,979		123		26,911			
Cottonseed oil cake.....	1,931				4,499			
Cottonseed meal.....	421				302			
Drugs.....	606				11			
Dyes.....				24				
Dyewoods.....	30				668			
Earthenware.....	496		33					
Eggs, dried.....	1,974							
Explosives.....	627	124	245	31				
Fertilizer.....	421			12				
Fish meal.....	20				2,135			
Flour.....	64,580	116	1,107	470	18,841			6,664
Fruit, dried.....	104,240	916	625	177	95,384			

* Includes 16,870 tons Far East to Europe.

* Includes 7,295 tons Far East to Europe.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.

ATLANTIC.

(Figures represent tons of 2,240 pounds.)

West coast Europe.	West coast Central America to Cristobal.	West coast Central America to Europe.	West coast South America to east coast of United States.	West coast of South Amer- ica to Cristobal.	West coast South America to Europe.	Australasia to east coast United States.	Australasia to east coast Canada.	Australasia to Europe.	Philippine Islands to east coast United States.	Far East to east coast United States.	Miscellaneous.	Total.
				50	800	15	30					107
				9								7,611
											9	4,125
												5,548
												56,950
3	25		2	7	6	12	29	10			30	1,572
			1	2		3	11					664
	9			8							16	33
	2									4,827	535	5,447
		60										60
				2						1,490		1,783
21			17	73	83							173
			42	15	1,572							1,629
18	8		5	20	167			45			390	2,403
6,266				47	33,423						2,445	275,064
	10		8,811	1,471	6,146			91		9,662	23,318	112,679
			40		2							42
			146		48							194
			168									269
				26	771							91,921
			355	426	17,276							18,194
												85
										66		878
										509		1,332
14,435				135	71					176	8,095	191,875
2,560	10			2	30	1,041	89			27	11,243	421,455
					28	10	44	176				1,912
415								623			35	8,049
16												466
			184	3						32	32	70,899
1,011	5				12	185	20	64		49	40	111,709
												532
												8,094
												949
												437
	2		2,547	42		1				351	32	13,028
				50				150				1,417
11	81	4	2,803	12,942	2,257	79		742	104			200
			70	11	40							19,597
										94		181
	43,870	20,822	22,144	52,101	1,411	43		416				3,199
		269									2,995	147,045
												269
						1,394	552	14,431				107
				6		38	12,377	73,328				246
							597	72,557				73,702
346								2,063		871		5,711
2,211											19	5,406
			65					567				1,944
			21			10	321	5,015				5,432
8						1,170	1,449	129,537				132,201
15					56	258	53	5,700				7,447
												24
250	90		11	23	170	10,787		46,386	33,379			109,172
12,081					495							13,668
	405	22	8,605	498	36,696			355		1,174	640	103,408
			334	181	32,066							39,011
					100							823
			23	20	26					27		713
	5		17		13							59
	354	219			9			19			2,350	3,649
			19								106	654
						2		65		323		2,362
								9		140	628	1,806
3,687												433
11,176					532						500	6,342
603			265	64	28	3,969				100	13	103,486
												206,384

* Includes 8,061 tons Hawaii to east coast United States.

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States interoceanal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian interoceanal.	West coast Canada to West Indies.
Fruit, fresh.....	7,118	6,897	762		102,066			
Fuller's earth.....	152				134			
Furniture.....	1,580							
General.....	134,847	3,580	3,273	5,943	22,721	2,019	1,738	623
Glass and glassware.....	1,748		151		600		54	
Glue.....	528				139			
Graphite.....								
Guano.....	98							
Gum:								
Kauri.....						2		
Yucca.....								
Other.....	50							
Hair.....	902							
Hardwoods.....	1,079		77		336		9	
Hats.....								
Hay.....	3,119				56			
Hemp.....	12,418				1			
Honey.....	1,014	5			2,192			
Hops.....	898				2			
Horns and hoofs.....	26				2			
Indigo.....								
Infusorial earth.....	523	193			1,181			
Iodine.....								
Ivory nuts.....		1						
Jute.....	646							
Linoleum.....	744				57			
Liquors.....	55			10			1,443	386
Livestock.....					12			
Lumber.....	2,205,097	24,702	2,496	19,586	534,937	333,703	139,907	37,032
Manufactured goods:								
Iron and steel.....	20,457	2,237	865	200	1,137			
Machinery.....	10,800	1,015	856	133	1,675		13	
Railroad material.....	102						2,614	
Tinplate.....	890							
Textiles.....	4,014	68	239	6	897			
Miscellaneous.....	33,178	78	553	37	3,676	72		171
Marble.....	160							
Matches.....	136							
Metals:								
Antimony.....	2,100							
Copper.....	106,366				51,326	1,250		
Gold and silver.....	59							
Iron.....	458							
Lead.....	7,438	25			1,823			
Scrap.....	6,556				1,787			
Tin.....	1,093							
Zinc.....	19,974		40		621			
Other.....	633				50			
Milk, powdered.....	6,932		225		84			
Molasses.....								
Nitrates.....	42							
Nuts.....	2,527		7		400			
Oats.....	155	29	20		254			525
Oil:								
Coconut.....	869	6		11				
Cottonseed.....	7,813							
Crude.....	69,850			9,103	43,284			
Gas and fuel.....	450,692	11,094	117	23,978	76,692			
Gasoline, benzine, naphtha.....	2,632,817	1,652	3,411	46,786	1,187,729			
Kerosene.....	179,855	311	463	5,871	91,090			
Linsed.....	39				403			
Lubricating and greases.....	42,133	107	116	15	1,162		45	
Olive.....	678							
Vegetable.....	2,024	10		41	68			
Whale.....								
Wood.....	526	7			24			
Other.....	4,014							
Ore:								
Antimony.....	45							
Chrome.....								
Copper.....	7,390	121			3,470			

* Includes 14,238 tons west coast United States to east coast Central America; 13,766 tons Far East to Europe; 9,784 tons west coast United States to Africa; 3,300 tons west coast Canada to Africa.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

[illegible]

⁵ Includes 123,487 tons west coast South America to Egypt; 8,305 tons west coast South America to West Indies.

⁶ West coast South America to east coast Canada. ⁷ West coast United States to east coast Canada.

⁷ West coast United States to east coast Canada.

Table II.—Classification of Cargo Passing Through the Panama Canal

PACIFIC TO

(Figures represent tons of 2,240 pounds.)

Commodity.	United States intercoastal.	West coast United States to east coast South America.	West coast United States to Cristobal.	West coast United States to West Indies.	West coast United States to Europe.	West coast Canada to east coast United States.	Canadian intercoastal.	West coast Canada to West Indies.
Ore—Continued:								
Gold and silver.....	48				7			
Iron.....	446							
Lead.....						1,250		
Magnetite.....	17,922							
Manganese.....	6,281							
Tin.....	360				38			
Zinc.....	1,105							
Other.....	1,703	260			482			
Paint.....	5,876	16	25		3			
Paper.....	86,194	1,881	1,225	1,859	1,023	6,037		571
Paper pulp.....	87,569	535	50		11,077	7,940		
Paper roofing.....	107	15			42			
Peanuts.....	4,522		38					
Peas.....	1,616							84
Phosphates.....	749					371		
Plaster.....	190							
Pollards.....								
Porcelain.....	11,076	8	96		4			86
Quicksilver.....	1							
Rags.....	4,583				311			
Rice.....	553	1,293	260	11,442	2,421		396	
Rope.....	1,544							18
Rubber:								
Manufactured.....	1,510	2	16		547			
Raw.....	75				27			
Scrap.....	495				3,785			
Rye.....								
Salt.....	475							
Seeds:								
Cotton.....					205			
Grass.....	1,005				7			
Hemp.....	914							
Other.....	4,335			15	126			
Shells.....	242				15			
Silk, raw.....	19,846	2	7					
Skins and hides.....	25,038	4	11		79	20		
Slag.....								
Soap.....	1,943			217				
Soda.....	16							
Sugar.....	108,079		167					
Sulphur.....	127							
Syrup.....	237							
Talc.....	1,590		10	10	27			
Tallow.....	4,098	227	220	365	82			
Tar.....	6							
Tartar.....	23							
Tea.....	614		535				908	
Tobacco.....	1,236	525			92			
Toys.....	952		21					
Vegetables.....	2,252	19	1,126	101				
Waste.....	1,722				18	1,000		
Wax.....	1,730		261					
Wheat.....	3,181	573	380	15	436,970			
Wine.....	2,166						12	250
Wool.....	46,109	50						
Total.....	7,328,534	62,451	32,357	141,275	3,319,428	353,717	154,743	48,031

^a Includes 61,060 tons Far East to West Indies.

Revision of Telephone Directory.

The copy for a revised telephone directory, to be issued as of January 1, 1931, will go to the printer November 15, 1930. All changes or corrections in the present directory should be forwarded to the Telephone Supervisor, Balboa Heights, not later than November 7, 1930. Proof corrections will be made to December 1, 1930.

Showing Origin and Destination, Fiscal Year Ended June 30, 1930.—Continued.

ATLANTIC.—Continued.

(Figures represent tons of 2,240 pounds.)

West coast Canada to Europe.	West coast Central America to Cristobal.	West coast Central America to Europe.	West coast South America to east coast of United States.	West coast of South America to Cristobal.	West coast South America to Europe.	Australasia to east coast United States.	Australasia to east coast Canada.	Australasia to Europe.	Philippine Islands to east coast United States.	Far East to east coast United States.	Miscellaneous.	Totals.
	7		775		2,789			2				3,621
			1,901,564		842						2,000	1,981,771
500			789		2,328		76,912					3,617
			a 3,935		919	27,058						19,172
			6		48,413	5,537		16		255		38,193
310			1,170		18,559							54,625
794			6,650		2,514	50		7,559		529		21,144
	4											20,541
												5,921
									13	14	2,625	101,442
											1,640	108,861
												164
										263	10	4,833
1		3,000			415	142		3,892		141	478	9,769
								8,250				9,370
												190
					150							150
					22			729	90	6,527	594	19,210
												23
362								10		417		5,683
50			34	629						5,328	67,354	89,795
								3	115			1,090
25						10						2,110
67			80	82		18		93				375
						49						4,396
					182							182
					20							495
			162	8	205			695			36	1,311
					73	148	35	256				1,824
					20	4				50		988
51			4	15	124	41	40	182		934	16	5,933
	155	2				1,450		309			30	2,263
				38						1,286		21,179
9	522	25	2,762	1,574	1,968	20,026	1,010	8,175		3,216	16	64,449
			89			95						89
			739									2,255
	637		7,758	2,352	163,554		9,000	22,988	521,425	3,627	80,812	920,399
												127
												237
25			14			706	172	15,842		283	42	1,637
								43		28		22,026
					8							77
												31
										7,840		9,897
								25	21			1,899
										19		992
			1,898	66	51		50				1,501	7,064
										609		3,349
			72	18	21			5				1,107
1,036,889			73		5,829	85	42	8,078			10,920	1,503,035
	3		6	6	1,756		167	1,500				5,869
			2,583	57	2,953	10,957	352	76,767	15	5,228		145,071
1,390,786	52,278	26,378	3,144,475	91,096	1,934,744	238,803	34,606	594,930	685,277	132,907	787,091	20,554,507

* Includes 5,472 tons west coast South America to east coast Canada; includes 74,656 tons Hawaii to east coast United States.

** Includes 10,823 tons west coast Canada to east coast South America.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, October 18, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Ebro.	11	15	20	12	6	00	12	14	10	12	15	10							
City of Rayville ²	11	21	05	12	6	20	12	14	24	12	15	50				General.	2,720	9,291	6,301
Willaro	12	4	05	12	7	15	12	15	21	12	16	40				General.	1,500	7,097	5,241
New Jersey ²	12	6	35	12	7	25	12	15	30	12	16	40				General.	2,900	5,684	4,070
Bosworth	12	6	55	12	8	30	12	15	30	12	17	40				Ballast.	6,925	5,014	
Angie Branch.	12	8	05	12	8	45	12	16	35	12	18	05				Ballast.	6,778	4,837	
Langbelem.	12	10	25	12	10	35	12	17	10	12	18	15				General.	1,994	5,112	3,511
Point Reyes	12	11	10	12	11	35	12	18	55	12	20	12				Ballast.	6,671	4,831	
Annie	12	11	10	12	11	35	12	18	55	12	20	12				General.	2,933	2,023	2,917
Johnson ²	12	11	12	12	11	35	12	18	45	13	16	45				General.	4,120	6,650	4,919
Nurtureton	12	17	05	12	17	39	13	9	31	13	10	35				Ballast.	6,854	4,746	
Pomona.	12	23	20	13	6	15	13	13	27	13	17	50				Steel, general.	7,753	8,324	6,036
California																			
Standard ²	13	00	25	13	7	20	13	14	15	13	15	50				Ballast.	11,719	8,619	
Carlton	13	7	10	13	10	00	13	17	41	13	18	50				Ballast.	5,612	4,119	
Gen. G. W.																			
Getty ³	13	11	25	13															
Lake Ormoc ²	13	18	30	14	6	10	14	14	04	14	15	39				Ballast.	2,359	2,758	1,741
Canadian																			
Constructor.	13	19	30	14	6	00	14	13	17	14	16	45				General.	5,093	7,630	5,491
Riverton	14	1	00	14	7	45	14	15	41	14	16	45				Ballast.	5,761	4,129	
Buchaness.	14	3	50	14	8	20	14	14	51	14	16	15				General.	7,270	6,656	4,951
Tongarric.	14	8	05	14	8	20	14	16	42	14	23	00				General.	8,316	10,817	7,562
New York	14	2	55	14	8	45	14	17	26	14	19	09				Ballast.	6,775	4,841	
Missourian ²	14	9	40	14	10	05	14	17	57	14	20	00				General.	3,352	8,567	6,020
Dorothy																			
Luckenbach.	14	17	30	14	18	00	15	9	08	15	10	31				General.	4,600	9,294	6,861
Toro Point ⁴	14	13	33	15	6	10	15	13	00	15	21	40				Ballast.	2,314	7,819	6,101
Baarn.																			
Canadian																			
Ranger.	15	2	30	15	7	15	15	15	15	15	16	50				General.	2,209	5,879	4,121
Tashmoo.	15	10	15	15	10	20	15	17	32	15	18	42				General.	3,500	3,954	2,628
Loriga ²	15	21	00	15	10	35	15	17	45	15	22	40				General.	6,255	7,351	5,091
Santa Clara.	15	3	35	15	12	00	15	18	11	16	2	15				General.	2,205	11,630	7,443
Salutaria	15	7	35	15	12	40	15	19	55	15	21	10				Gen., bananas.	697	7,827	5,429
Vinland ²	15	3	20	15	14	10	15	11	14	15	12	45				General.	6,634	5,413	3,965
Tiger ¹	15	18	30	15	19	10	16	11	14	16	12	15				Ballast.	8,201	6,207	

¹ Launch.² Motor ship.³ Tanker.⁴ Launch.

	14	17	25	16	6.08	16	13.12	16	14.20	British	T. & J. Harrison	395.5	52.2	18.3	Liverpool, England	Pt. Town d, Wash.	5,763	3,857
Counselor	14	23	00	16	7.00	16	14.45	16	15.45	British	Anglo-Saxon Pet. Co.	427.0	53.3	18.3	N. Shields, Eng.	Los Angeles, Calif.	6,218	4,248
Aebolina	16	7	25	16	8.25	17	17.00	16	18.00	American	Kellogg S. S. Corp.	390.0	53.0	23.6	Sydney, N. S.	Vancouver, B. C.	4,500	6,205
Ruth Kellogg	16	13	30	16	13.40	16	21.20	16	22.23	American	Tidewater Oil Co.	480.3	66.0	23.0	New York, N. Y.	San Francisco, Calif.	9,734	6,349
Tidewater	16	6.15	16	14.30	16	17.10	16	16.15	16	22.23	U. S. Army	436.0	59.0	24.6	New York, N. Y.	San Francisco, Calif.	246	
Siomea	16	16	25	16	17.05	17	9.41	17	10.35	British	Blue Star Line	450.0	59.5	21.6	Liverpool, England	Vancouver, B. C.	8,240	5,395
Tacoma Star	16	18	40	17	6.05	17	14.07	17	15.30	British	Andrew Weir & Co.	394.0	58.6	24.6	Tampico, Mexico	Brisbane, Australia	6,501	4,852
Salvage	16	22	30	17	6.15	17	14.44	17	15.40	American	Dimon S. S. Corp.	409.7	54.2	19.1	Norfolk, Va.	Seattle, Wash.	3,189	6,687
Pacific Oak	17	5.45	17	7.20	17	15.40	17	21.35	American	Dollar Line	502.0	62.0	23.0	New York, N. Y.	San Francisco, Cal.	4,054	12,583	
Grifford	17	6.00	17	7.20	17	16.43	18	3.25	American	Panama-Pacific Line	574.4	62.0	23.4	New York, N. Y.	San Francisco, Cal.	3,452	24,506	
California	17	2.45	17	8.25	17	17.05	17	18.30	Danish	East Asiatic Co.	425.0	55.0	15.3	Copenhagen, Den.	Portland, Oreg.	7,382	5,663	
Chile	17	3.45	17	8.40	17	17.32	17	19.16	British	Anglo-Asiatic Oil Co.	407.0	52.2	20.10	Philadelphia, Pa.	La Libertad, Ecua.	6,046	4,326	
El Guero	17	4.40	17	9.40	17	17.57	17	23.18	American	Vacuum Oil Co.	500.0	62.8	25.0	Philadelphia, Pa.	Los Angeles, Calif.	11,225	7,913	
F. H. Hillman	17	22	30	17	9.50	17	18.33	17	20.00	British	Pacific Steam Nav. Co.	290.0	41.7	18.0	Crisholm, C. Z.	Champerio, Guat.	685	1,587
Champerio	17	6.55	17	9.50	17	18.54	17	20.28	Norwegian	Companie El Aguila	280.5	44.2	17.0	Tampico, Mexico	La Paz, Mexico	1,796	2,937	
Caspy	17	15.15	17	15.50	17	22.45	18	4.54	American	Standard Transp. Co.	435.0	56.0	18.6	Providence, R. I.	Los Angeles, Calif.	7,165	4,926	
Ame	16	17.45	17	20.05	18	9.32	18	10.33	Italian	Nav. Libera Triestina	433.0	55.0	18.1	Venice, Italy	Vancouver, B. C.	2,184	7,790	
Cedina	17	17.00	17	20.25	18	17.35	18	12.35	American	Richfield Oil Co.	431.0	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	8,093	5,347	
China Service	17	15.55	18	17.17	17	17.35	18	12.35	American	U. S. Navy		52.0	9.0	Crisholm, C. Z.	Gatun, C. Z.	180	238	
Oklahoma	17	18.00	18	6.00	18	14.16	19	6.05	Colombian	National Navigation Co.	107.0	22.0	9.0	Buenaventura, Col.	Buenaventura, Col.	4,473	7,141	
Commauder	17	15.55	18	6.00	18	14.16	19	6.05	Colombian	National Navigation Co.	107.0	22.0	9.0	Buenaventura, Col.	Buenaventura, Col.	4,473	7,141	
Cauca	17	18.00	18	6.00	18	14.16	19	6.05	Colombian	National Navigation Co.	107.0	22.0	9.0	Buenaventura, Col.	Buenaventura, Col.	4,473	7,141	
Enil Kirobri	17	11.35	18	7.00	18	15.05	19	3.18	German	Hamburg-American Line	436.0	61.0	21.11	Hamburg, Germany	Portland, Oreg.	2,933	9,267	
Seattle	17	11.35	18	7.00	18	15.05	19	3.18	German	Hamburg-American Line	436.0	61.0	21.11	Hamburg, Germany	Portland, Oreg.	2,933	9,267	
Knute Nelson	17	14.30	18	7.20	18	15.38	18	16.45	German	Fred Olsen & Co.	449.0	58.2	15.5	Oslo, Norway	Vancouver, B. C.	4,922	8,016	
Witell	17	21.00	18	8.20	18	15.38	18	16.45	German	North German Lloyd	449.0	58.2	15.5	Hamburg, Germany	Vancouver, B. C.	4,922	8,016	
Havbor	17	21.00	18	8.20	18	15.38	18	16.45	German	North German Lloyd	449.0	58.2	15.5	Hamburg, Germany	Vancouver, B. C.	4,922	8,016	
Montanan	18	6.40	18	8.40	18	16.32	18	17.40	Norwegian	Anglo-Saxon Pet. Co.	404.0	53.0	21.0	Fall River, Mass.	San Francisco, Cal.	2,950	6,756	
Borgestad	18	9.45	18	9.30	18	17.28	18	18.50	Norwegian	Amer-Hawaiian Line	404.0	53.0	21.0	Boston, Mass.	Portland, Oreg.	2,950	6,756	
City of	18	10.00	18	10.10	18	17.48	18	19.00	British	Australia Dispatch Line	351.0	51.0	23.0	Galveston, Texas	Auckland, N. Z.	5,280	4,716	
Victoria	18	10.00	18	10.10	18	17.48	18	19.00	British	Australia Dispatch Line	351.0	51.0	23.0	Galveston, Texas	Auckland, N. Z.	5,280	4,716	
Jandore	17	17.25	18	10.30	18	16.29	18	16.29	American	Can-Ameyr. Ship. Co.	411.5	54.1	15.6	London, England	Vancouver, B. C.	6,597	4,989	
Mamalees	9	15.05	18	11.10	18	15.40	18	20.00	German	I. Zallach	133.0	24.0	10.0	New York, N. Y.	San Francisco, Cal.	3,345	223	
Marl	18	11.35	18	11.40	18	21.00	18	23.04	Spanish	Roland Line	216.3	22.9	12.10	Crisholm, C. Z.	Mayaguez, P. R.	190	1,132	
Lochmonar	17	11.30	18	11.40	18	21.00	18	23.04	Spanish	The Fenwick Corp.	350.4	50.1	20.6	Cardiff, Eng.	Valencia, Spain	4,900	4,346	
Naples Maru	17	11.30	18	11.40	18	21.00	18	23.04	Spanish	The Fenwick Corp.	350.4	50.1	20.6	Cardiff, Eng.	Valencia, Spain	4,900	4,346	
Chas. R.	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C.	Vancouver, B. C.	3,327	10,772	
McCormick	18	14.25	18	13.35	18	19.36	19	2.43	Japanese	Royal Mail S. S. Co.	385.0	62.0	22.3	Vancouver, B. C				

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Nct.
Holmport	12	1.00	12	8.33	12	17.35	12	17.35	British	J. & J. Denholm, Ltd.	423.5	56.0	25.0	Toopilla, Chile	Azores ¹²	Nitrates	8,800	6,449	4,659
Astral	12	5.30	12	9.16	12	18.15	12	18.15	American	Standard Transp. Co.	439.5	58.0	23.0	Los Angeles, Calif.	New York, N. Y.	Gas oil	10,321	8,913	6,210
Texmar	12	6.00	12	9.49	12	18.40	12	18.40	American	Central S. S. Corp.	400.5	54.3	26.0	Olympia, Wash.	Baltimore, Md.	Lumber	7,297	6,567	4,908
Lagarto	12	6.00	12	9.49	12	18.40	12	18.40	British	Pacific Steam Nav. Co.	385.0	52.0	25.0	Tacubano, Chile	Hull, England	Nitrates, general	5,828	5,656	3,823
San Roberto	12	22.50	13	5.58	13	13.30	13	16.00	British	Anglo-Mexican Pet. Co.	407.1	52.2	26.0	Los Angeles, Calif.	Lizards, Eng.	Gasoline	7,543	6,239	4,350
Toborg	11	6.45	13	6.39	13	14.35	13	14.35	Norwegian	Anglo-Saxon Pet. Co.	411.1	53.2	18.0	Los Angeles, Calif.	Curacao, D. W. I.	Ballast	6,239	4,494	
Donau	13	4.20	13	7.11	13	15.40	14	00.05	German	North German Lloyd	320.8	53.0	25.0	Vancouver, B. C.	Hamburg, Germany	General	10,734	11,007	7,698
Paris City	13	5.30	13	8.05	13	15.40	13	19.10	British	Reardon Smith Line	411.6	53.0	25.0	New West ster, B. C.	Manchester, Eng.	General	8,450	6,673	4,764
Zinski	13	6.20	13	8.40	13	16.45	13	18.25	Yugoslav	Barbuzin & Co.	400.0	53.0	27.0	Tatal, Chile	Azores ¹²	Nitrate of soda	8,470	6,207	4,587
Casleborn	13	11.45	13	12.41	13	19.25	13	21.10	American	Charles Nelson & Co.	321.7	50.0	20.0	Talcahuano, Cal.	New York, N. Y.	Lumber, general	3,300	3,872	2,568
Santa Rita	13	12.15	13	14.51	13	21.25	14	1.08	American	Grace Line	370.0	53.2	22.0	Talcahuano, Cal.	New York, N. Y.	General	3,706	6,254	4,089
Sweland	13	11.00	13	16.14	14	13.20	14	13.20	Swedish	Ore S. S. Corp.	361.1	72.2	34.4	Cruz Grande, Chile	Sparrows Pt., Md.	Iron ore	22,146	15,424	4,421
Texas	13	16.35	13	17.18	14	14.15	14	14.15	American	Inter-Hawaiian Line	471.0	80.2	30.0	Portland, Ore.	Boston, Mass.	Lumber, general	9,819	9,154	6,966
Virginia	13	17.00	14	6.14	14	13.50	14	14.35	American	Panama-Pacific Line	386.4	87.3	32.0	San Francisco, Cal.	New York, N. Y.	General	8,886	25,254	18,170
Lake Benbow	13	18.40	14	6.41	14	15.30	14	15.30	American	Ford Motor Co.	250.5	45.8	18.0	Newport, Ore.	Philadelphia, Pa.	Lumber	1,052	2,676	1,707
Axel Johnson	13	23.30	14	7.00	14	15.10	15	1.10	Swedish	Johnson Line	392.0	52.6	25.0	Vancouver, B. C.	Stockholm, Sweden	General	5,560	6,642	4,800
Cities Service	14	2.00	14	7.45	14	16.50	14	16.50	American	Cities Service Transp. Co.	468.3	62.7	30.5	Los Angeles, Calif.	New York, N. Y.	Gas oil	14,850	9,808	7,294
Petrol	14	6.00	14	8.09	14	16.10	15	1.10	French	French Line	470.3	61.2	25.0	Vancouver, B. C.	Le Havre, France	General	6,350	10,476	7,063
Wyoming	14	6.00	14	8.09	14	16.10	15	1.10	French	French Line	470.3	61.2	25.0	Vancouver, B. C.	Le Havre, France	General	6,350	10,476	7,063
Victrola	14	12.05	14	12.53	14	21.30	14	21.30	British	Imperial Oil Co., Ltd.	510.2	63.2	29.0	Talara, Peru	Halifax, N. S.	Crude oil	15,792	11,575	7,648
Yankee Arrow	14	13.30	14	14.14	14	21.55	14	21.55	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,571	9,841	6,946
Pacific Spruce	14	14.30	14	15.09	14	22.35	14	22.35	American	Dixon S. S. Corp.	410.5	64.0	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,500		
Benjamin	14	14.30	14	15.09	14	22.35	14	22.35	American	Dixon S. S. Corp.	410.5	64.0	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general	7,500		
Franklin	14	16.40	14	20.05	15	11.10	15	15.20	Norwegian	Frøed Olsen & Co.	452.0	59.5	27.3	Vancouver, B. C.	Oslo, Norway	Wheat, general	8,153	9,081	6,140
Illinois	15	2.00	15	6.02	15	14.00	15	14.00	American	The Texas Co.	416.8	56.1	25.0	Pt. San Luis, Calif.	Pt. Arthur, Texas	Gasoline	7,473	6,945	5,062
Sachsen	15	1.00	15	6.54	15	15.35	15	22.55	German	Hamburg-American Line	489.0	58.3	27.0	Valparaiso, Chile	Hamburg, Germany	General	9,714	9,624	6,732
Robert	15	1.00	15	6.54	15	15.35	15	22.55	German	Hamburg-American Line	489.0	58.3	27.0	Valparaiso, Chile	Hamburg, Germany	General	9,714	9,624	6,732
Lukenbach	15	3.01	15	7.58	15	16.30	15	16.30	American	Lukenbach Line	445.0	58.0	29.0	Portland, Ore.	Boston, Mass.	Lumber, general	9,630	8,695	6,375
Ryuyo Maru	15	5.45	15	8.26	15	17.40	15	18.35	Japanese	Yokohama Specie & S. Co.	400.5	53.7	28.0	Vancouver, B. C.	Hull, England	Wheat	8,450	7,018	5,059
San Gabriel	15	9.00	15	9.43	15	18.00	15	18.00	American	Pacific-Atlantic S. S. Co.	386.8	52.2	25.0	Seattle, Wash.	Baltimore, Md.	Wheat	6,000	5,719	4,023
Bisaya	15	9.00	15	9.43	15	18.00	15	18.00	American	Pacific-Atlantic S. S. Co.	386.8	52.2	25.0	Seattle, Wash.	Baltimore, Md.	Wheat	6,000	5,719	4,023
Sumit	15	11.00	15	11.48	15	20.10	15	20.10	American	Atlantic Tank Rhderei	412.6	55.1	25.0	Los Angeles, Calif.	Avonmouth, Eng.	Benzine	8,413		
Hull	15	11.00	15	11.48	15	20.10	15	20.10	American	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,634	9,619	6,486
Sumit	15	11.00	15	11.48	15	20.10	15	20.10	American	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,634	9,619	6,486
S-14	15	11.30	15	12.44	15	20.10	15	20.10	American	McCormick S. S. Co.	431.0	54.3	25.3	Balboa, C. Z.	Buenos Aires, Arg.	Lumber, general	6,452	6,584	5,080
S-14	15	11.30	15	12.44	15	20.10	15	20.10	American	McCormick S. S. Co.	431.0	54.3	25.3	Balboa, C. Z.	Buenos Aires, Arg.	Lumber, general	6,452	6,584	5,080
Dreadnought	16	00.20	16	6.55	16	14.12	16	22.15	British	V. Pacific Coast Line	301.0	62.0	29.2	Vancouver, B. C.	Rotterdam, Holland	General	9,302	10,703	7,619
Ionio	16	0.50	16	7.09	16	14.55	16	23.50	British	Shaw, Savill & Allion	300.3	63.3	26.0	Wellington, N. Z.	London, England	Frozen, general	4,534	12,872	9,577
Arara	16	6.50	16	10.33	16	17.45	16	23.50	British	Pacific Steam Nav. Co.	303.0	43.0	14.0	Callao, Peru	New York, N. Y.	General	436	2,851	1,776
San Simon	16	13.50	17	6.42	17	13.45	17	13.45	American	Quaker Line	410.5	54.3	24.1	Portland, Ore.	Philadelphia, Pa.	Lumber, general	6,062	6,573	4,916
Benwayis	16	20.45	17	6.47	17	14.20	17	14.20	British	Can. Amer. Ship. Co.	429.0	53.0	23.4	Kamchatka, Japan	London, England	General	7,000	6,531	4,219

¹² For orders.¹³ Lumber, general, and copper.¹⁴ Coffee, cocoa, hides, and wool.¹⁵ Motor ship.¹⁶ Submarine.¹⁷ Tanker.¹⁸ Canned salmon and lumber.

Mathew	17	2 12	17	7 26	17	14 50	17	14 50	American	434.0	57 7	25 3	Portland, Oreg.	Mobile, Ala.	General	6,276	7,977	5,764
Luckenbach...	17	5 00	17	8 14	17	15 50	17	19 55	British	430.0	57 8	24 2	Taculauano, Chile.	New York, N. Y.	General	2,041	9,158	6,176
Esacubio...	17	4 05	17	8 26	17	16 30	17	16 30	Japanese	385.0	51.0	24.1	Kamchatka, Japan.	London, England.	General	4,454	5,928	4,381
Thames Mart...	17	4 05	17	8 26	17	16 30	17	16 30	Japanese	385.0	51.0	24.1	Kamchatka, Japan.	London, England.	General	4,454	5,928	4,381
Gertrude	17	4 20	17	9 02	17	16 45	17	18 10	Danish	420.0	53.0	26.0	Port Lamou, P. I.	Providence, R. I.	General	7,035	7,385	5,500
Maersk &...	17	4 20	17	9 02	17	16 45	17	18 10	Danish	420.0	53.0	26.0	Port Lamou, P. I.	Providence, R. I.	General	7,035	7,385	5,500
Sea Thrush...	17	5 20	17	9 37	17	18 00	17	18 00	American	410.0	54.2	24.2	Portland, Oreg.	Boston, Mass.	General	7,414	6,625	4,841
Constance	17	5 15	17	10 32	17	19 15	17	19 15	American	409.6	54.2	24.4	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,958	6,621	4,891
Chandler	17	8 00	17	11 01	17	19 35	17	19 35	American	380.0	53.2	24.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	5,908	5,654	4,123
Sutherland...	17	10 00	17	11 25	17	20 15	17	20 15	American	404.0	54.9	27.0	Seattle, Wash.	Boston, Mass.	General	6,444	6,706	4,767
Hawaiian...	17	7 30	17	12 17	17	20 50	18	6 10	British	407.0	52.2	25.0	Kamchatka, Japan.	Liverpool, England.	Canned salmon.	6,859	6,468	4,636
Dolius &...	17	12 45	17	13 25	17	21 58	18	2 40	American	402.0	54.2	27.0	Honolulu, T. H.	N. Atlantic coast.	Sugar	8,500	6,936	5,024
Maine...	17	12 45	17	13 25	17	21 58	18	2 40	American	402.0	54.2	27.0	Honolulu, T. H.	N. Atlantic coast.	Sugar	8,500	6,936	5,024
Danver...	17	8 00	17	17 59	18	14 40	18	14 40	American	550.3	72.2	34.4	Balboa, C. Z.	Cristobal, C. Z.	Cruiser	22,146	15,551	4,297
Mauro...	17	8 00	17	17 59	18	14 40	18	14 40	American	550.3	72.2	34.4	Balboa, C. Z.	Cristobal, C. Z.	Cruiser	22,146	15,551	4,297
W. D. Anderson	17	6 57	18	6 04	18	15 20	18	15 20	American	392.0	51.0	24.0	Oleum, Calif.	Philadelphia, Pa.	Gasoline.	5,260	5,412	3,765
K. K.	17	23 47	18	6 43	18	16 40	18	16 40	American	440.0	58.2	28.1	Vanouever, Calif.	Paulsboro, N. J.	Gasoline.	9,350	9,033	5,938
Kingsbury &	17	23 06	18	7 10	18	18 05	18	18 05	British	309.7	51.9	24.3	Vanouever, B. C.	Glasgow, Scotland.	General	6,106	5,831	4,341
Parthenia...	17	23 06	18	7 10	18	18 05	18	18 05	British	309.7	51.9	24.3	Vanouever, B. C.	Glasgow, Scotland.	General	6,106	5,831	4,341
S-16 &...	17	23 06	18	7 10	18	18 05	18	18 05	British	309.7	51.9	24.3	Vanouever, B. C.	Glasgow, Scotland.	General	6,106	5,831	4,341
Forbes	18	2 00	18	8 31	18	18 45	18	18 45	American	409.8	54.2	27.2	St. Helens, Oreg.	Baltimore, Md.	Lumber	8,520	6,831	4,960
Hauptman...	18	4 37	18	9 06	18	19 20	18	19 20	American	420.5	54.2	26.0	Longview, Wash.	Baltimore, Md.	Lumber	7,944	7,343	5,357
Sagadahoc...	18	20 55	18	10 16	18	19 50	20	6 35	American	401.0	54.0	19.4	San Diego, Calif.	Hampton Rds., Va.	General	3,211	3,010	4,094
Sirius...	18	7 00	18	10 25	18	20 30	18	20 30	British	410.0	53.5	26.0	Los Angeles, Calif.	London, England.	Gasoline	7,923	6,010	4,944

Tanker.

16 Barley and canned goods.

3, and lumber.

3 Coffee and cylinders

PORT OF CRISTOBAL.

* ARRIVALS.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 12.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.	October 12.	No. 9685 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts.
October 12.	No. 9670 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts.	October 12.	No. 9137 ¹⁹ .	Pan American Airways.	Miami via wayports.
October 13.	Perou.	French Line.	St. Nazaire and wayports.	October 12.	Tolos.	United Fruit Co.	New York via Habana.
October 13.	Nora.	Arrow Oil Co.	Aruba, D. W. I.	October 12.	Aneon.	Panama R. R. S. Line.	New York via Haiti.
October 13.	Pastores.	United Fruit Co.	New York via Habana.	October 14.	Nora.	Arrow Oil Co.	Aruba, D. W. I.
October 13.	Darien C-35 ¹² .	Scatlair Airplane Co.	Barranquilla, Colombia.	Perou.	Perou.	French Line.	Havre via wayports.
October 14.	No. 9685 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts.	October 15.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
October 14.	No. 945-M ¹⁹ .	Pan American-Grace Airways.	Talara via wayports.	October 15.	No. 9670 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts.
October 15.	Irona.	United Fruit Co.	New Orleans, La.	October 15.	No. 142-M ¹⁹ .	Pan American Airways.	Miami via wayports.
October 15.	Venezuela.	Royal Netherlands S. S. Co.	Amsterdam and wayports.	October 15.	Anacahueta ²⁰ .	United Fruit Co.	Colon, Rep. of Panama.
October 15.	Metanan.	United Fruit Co.	New York via Kingston.	October 15.	Inapachima ²⁰ .	A. Taguapalos.	Colon, Rep. of Panama.

19 Air mail carrier.

Motor boat.

* DEPARTURES.

Date.	Vessel.	Line.	For—
October 12.	No. 9635 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts.
October 12.	No. 9137 ¹⁹ .	Pan American Airways.	Miami via wayports.
October 12.	Tolosa.	United Fruit Co.	New York via Habana.
October 12.	Ancon.	Panama R. S. S. Line	New York via Haiti.
October 14.	Nora.	Arrow Oil Co.	Aruba, D. W. I.
October 15.	Petrol.	French Line.	Havre via wayports.
October 15.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.
October 15.	No. 9670 ¹⁹ .	Pan American Airways.	San Salvador and wayp'ts
October 15.	No. 142-M ¹⁹ .	Pan American Airways.	Miami via wayports.
October 15.	Anacahueta ²⁰ .	United Fruit Co.	Colon, Rep. of Panama.
October 15.	Inapahuina ²⁰ .	A. Tagarinos.	Colon, Rep. of Panama.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 15.....	No. 9137 ²¹	Pan American Airways.....	Miami via wayports.	October 15.....	Ametia I. ²²	A. Tagaropolos.....	Colon, Rep. of Panama.
October 15.....	No. 9088 ²¹	Pan American Airways.....	San Salvador and waypts.	October 15.....	Venezuela.....	Royal Netherlands S. S. Co.....	Port Limon, Costa Rica.
October 15.....	Anachucama ²²	United Fruit Co.....	Colon, Rep. of Panama.	October 16.....	No. 144-M ²¹	Pan American Airways.....	La Guayra and wayports.
October 15.....	Ametia I. ²²	A. Tagaropolos.....	Colon, Rep. of Panama.	October 16.....	Iriona.....	United Fruit Co.....	Port Limon, Costa Rica.
October 15.....	Inapaquina ²²	Colombian S. S. Line.....	New York via wayports.	October 16.....	Metapan.....	United Fruit Co.....	New York via wayports.
October 16.....	Bridge town.....	Gough Brothers.....	Belize and wayports.	October 17.....	Anachucama ²²	Pan American Airways.....	Colon, Rep. of Panama.
October 16.....	Pasajero ²²	Standard Fruit & S. S. Co.....	New Orleans and Habana.	October 17.....	No. 9085 ²²	Seattle Airplane Co.....	San Salvador and waypts.
October 17.....	Anapala.....	Royal Netherlands S. S. Co.....	Port Limon, Costa Rica.	October 17.....	Bridge town.....	Colombian S. S. Line.....	Barranquilla and waypts.
October 17.....	Venezuela.....	United Fruit Co.....	Colon, Rep. of Panama.	October 18.....	Inapaquina ²²	A. Tagaropolos.....	New York via wayports.
October 18.....	Iriona.....	United Fruit Co.....	Port Limon, Costa Rica.	October 18.....	Iriona.....	United Fruit Co.....	Colon, Rep. of Panama.
October 18.....	Alumina.....	Hamburg-American Line.....	Tampico and wayports.	October 18.....	Anapala.....	Standard Fruit & S. S. Co.....	New Orleans and waypts.
October 18.....	Belray.....	Alumina.....	New Orleans, La.	October 18.....	Venezuela.....	Royal Netherlands S. S. Co.....	Amsterdam and wayports.
October 18.....	No. 144-M ²¹	Pan American Airways.....	La Guayra and wayports.	October 18.....	Rugia.....	Hamburg-American Line.....	Hamburg and wayports.
October 18.....	No. 9070 ²¹	Pan American Airways.....	San Salvador and waypts.	October 18.....	Pasajero ²²	Gough Brothers.....	Port Limon, Costa Rica.
October 18.....	No. 142-M ²¹	Pan American Airways.....	Miami via wayports.	October 18.....	Belray.....	Alumina.....	Puerto Cabello, Venez.
October 18.....	No. 945-M ²¹	Pan American-Grace Airways.....	Talara via wayports.				
October 18.....	Escupe Fuego ²²	Connelly & Paoli.....	Puerto Cabezas, Nic.				
October 18.....	Inapaquina ²²	A. Tagaropolos.....	Colon, Rep. of Panama.				

PORT OF BALBOA.

²¹ Air mail carrier.

²² Motor boat.

²³ Motor schooner.

October 14.....	Ginyo Maru.....	Nippon Yusen Kaisha.....	Hongkong, China.	October 14.....	Ginyo Maru.....	Nippon Yusen Kaisha.....	Valparaiso, Chile.
October 16.....	City of Panama ²⁴	Panama Mail S. S. Co.....	San Francisco, Calif.	October 16.....	City of Panama ²⁴	Panama Mail S. S. Co.....	Buenaventura, Colombia.
October 17.....	A. Valdez.....	A. Valdez.....	Panama Bay, R. P.	October 17.....	La Union ²⁵	A. Valdez.....	Panama Bay, R. P.
October 17.....	Des Hermanos ²⁵	Panama Bay, R. P.	Panama Bay, R. P.	October 17.....	Des Hermanos ²⁵	A. Valdez.....	Panama Bay, R. P.
October 17.....	Lo Nina ²⁵	Panama Bay, R. P.	Panama Bay, R. P.	October 17.....	Lo Nina ²⁵	A. Valdez.....	Panama Bay, R. P.
October 17.....	Samba ²⁵	Panama Bay, R. P.	Panama Bay, R. P.	October 17.....	Samba ²⁵	Hans Elliot.....	Panama Bay, R. P.
October 17.....	Real ²⁴	Panama Bay, R. P.	Panama Bay, R. P.	October 18.....	Real ²⁵	Hans Elliot.....	Panama Bay, R. P.
October 17.....	Nueva Panama ²⁴	Panama Bay, R. P.	Panama Bay, R. P.	October 18.....	Nueva Panama ²⁴	Hans Elliot.....	Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁴ Motor ship. ²⁵ Motor schooner.

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CANAL WORK IN SEPTEMBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of September, 1930.

BALBOA HEIGHTS, C. Z., October 18, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of September, 1930:

NUMBER OF TRANSITS.

During the month 458 commercial vessels and 15 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 26 vessels belonging to the United States Government and 1 transit of a vessel solely for repairs, on which no tolls were collected, making a total of 500 transits for the month, or a daily average of 16.67.

Tolls on the commercial vessels amounted to \$2,057,103.58, and on the launches to \$173.67, a total of \$2,057,277.25, or a daily average on all traffic of \$68,575.91.

Commercial traffic for the past month as compared with August, 1930, shows a decrease of 7 transits and \$23,126.84 in tolls although the daily averages of transits and tolls were slightly higher in September. As compared with September, 1929, commercial traffic for the past month shows a decrease of 65 transits and \$144,685.82 in tolls. Traffic in the first 9 months of the current calendar year has fallen off to the extent of 425 transits and \$986,789.64 in tolls, a decrease of 8.8 per cent and 4.8 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of September in the two preceding years and in 1930 are shown in the following tabulation:

	September, 1928.	September, 1929.	September, 1930.
Commercial vessels.....	487	523	458
Launches (under 20 tons).....	11	11	15
Noncommercial vessels:			
United States Government.....	17	33	26
Panamanian Government.....	2	3	.....
Colombian Government.....	1	.....	.....
Vessels for repairs.....	3	.....	1
Total.....	521	570	500

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, barges, tugs, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	9	5	14
Pedro Miguel.....	13	12	25
Miraflores.....	13	12	25
Total.....	35	29	64

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of September in 1929 and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March.....	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	458	2,468,280	2,438,895	2,598,162	2,402,047	2,250,582.37	2,180,511.82
August.....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
Total.....	4,819	4,394	22,557,563	21,831,600	23,545,285	21,023,447	20,552,891.31	19,566,101.67

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for September in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	September, 1928.	September, 1929.	September, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	487	523	458	515
Panama Canal net tonnage.....	2,295,053	2,425,261	2,314,424	2,498,385
United States net tonnage.....	1,771,095	1,852,540	1,738,958	1,899,255
Registered gross tonnage.....	2,909,454	3,058,032	2,870,592	3,119,221
Registered net tonnage.....	1,777,124	1,861,671	1,746,818	1,899,802
Tolls.....	\$2,111,230.56	\$2,231,789.40	\$2,057,103.58	\$2,256,407.50
Tons of cargo carried.....	2,313,011	2,432,783	2,059,582	2,502,519

The average daily number of transits, tonnage, tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	September, 1928.	September, 1929.	September, 1930.	
Number of transits.....	16.23	17.43	15.26	16.95
Panama Canal net tonnage.....	76,502	80,842	77,147	82,139
Tolls.....	\$70,374.35	\$73,392.98	\$68,570.12	\$74,183.26
Tons of cargo carried.....	77,101	81,093	68,653	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of September in 1928, 1929, and 1930 are shown in the following tabulation.

	Average per vessel.		
	Sept., 1928.	Sept., 1929.	Sept., 1930.
Panama Canal net tonnage.....	4,712	4,637	5,053
United States net tonnage.....	3,636	3,542	3,797
Registered gross tonnage.....	5,974	5,847	6,268
Registered net tonnage.....	3,650	3,560	3,814
Tolls.....	\$4,335.18	\$4,209.92	\$4,491.49
Tons of cargo (including vessels in ballast).....	4,750	4,652	4,497
Tons of cargo (laden vessels only).....	5,683	5,658	5,420

NATIONALITY OF VESSELS.

Sixteen nationalities were represented in the commercial traffic passing through the Canal in September, 1930. Vessels of United States registry, with 208, led in the number of transits, while those flying the British flag with 111, were second. Vessels of these two nationalities made up 69 per cent of the total transits for the month. Norway and Germany were next with 34 and 30, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of September, 1930, was 2,059,582 tons. Cargo from the Atlantic to the Pacific aggregated 595,589 tons, as compared with 679,407 in August, 1930, and 746,289 tons in September, 1929. From the Pacific to the Atlantic there were 1,463,993 tons, as compared with 1,469,062 tons in August, 1930, and 1,686,494 tons in September, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 186,679 tons, constituted the heaviest item of cargo, followed by phosphates with 39,537 tons, mineral oils with 34,912 tons, and cotton with 28,936 tons. There was a decrease of 150,700 tons of cargo, or 20.2 per cent, in this direction as compared with September, 1929, due to lessened shipments of many of the important commodities.

From the Pacific to the Atlantic mineral oil shipments totaling 462,213 tons, constituted the heaviest item, followed by lumber with 231,141 tons, wheat with 117,500 tons, miscellaneous canned goods with 104,427 tons, sugar with 81,752 tons, ores (principally iron) with 68,542 tons, and nitrates with 63,164 tons. There was a decrease of 222,501 tons, or 13.2 per cent, in this direction, as compared with September, 1929. Nitrate shipments declined 152,951 tons, or 70 per cent; ores, 91,308 tons, or 58 per cent; lumber, 47,500 tons, or 17 per cent. Mineral oils and wheat increased, respectively, 31,991 tons, or 7 per cent, and 31,844 tons, or 37 per cent, in comparison with the same month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per tons for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.923 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.722 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of September, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$5,710.00	\$4,976.00		\$734.00
British.....	496,871.81	529,896.60	\$33,024.79	
Chilean.....	8,665.00	9,410.00	745.00	
Colombian.....	1,470.40	1,311.00		159.40
Danish.....	33,240.00	34,792.00	1,552.00	
Danzig.....	21,537.54	18,689.20		2,848.34
Dutch.....	29,597.50	35,912.00	6,314.50	
French.....	51,469.08	53,878.40	2,409.32	
German.....	99,795.80	113,712.00	13,916.20	
Italian.....	32,200.04	35,902.20	3,702.16	
Japanese.....	83,461.10	80,120.00		3,341.10
Norwegian.....	133,488.79	142,287.20	8,798.41	
Panamanian.....	10,078.45	14,028.00	3,949.55	
Swedish.....	29,565.90	27,488.20		2,077.70
United States.....	1,010,993.14	1,047,968.60	36,975.46	
Yugoslav.....	8,959.03	7,163.40		1,795.63
Total.....	2,057,103.58	2,157,534.80	111,387.39	10,956.17
Net increase for all traffic.....			100,431.22	

The increase on vessels of United registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows.

United States intercoastal trade.....	\$28,793.55
United States foreign trade.....	8,606.39
United States—Canal Zone trade.....	* 424.48
Total.....	36,975.46

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in September, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	1.92		1.92
British.....	.65	1.19	.92
Chilean.....	.33	.47	.40
Colombian.....	1.39	.65	.89
Danish.....	.53	1.15	1.01
Danzig.....		1.79	1.79
Dutch.....	.33	1.42	.66
French.....	.33	1.27	.83
German.....	.70	1.39	1.08
Italian.....	.27	.99	.66
Japanese.....	1.12	1.32	1.21
Norwegian.....	1.21	1.63	1.54
Panamanian.....	.57	.77	.67
Swedish.....	1.27	4.85	2.42
United States.....	.73	1.35	1.10
Yugoslav.....		2.63	2.63
Averages, September, 1930.....	.71	1.53	1.07
Averages, September, 1929.....	.83	1.48	1.21
Averages, September, 1928.....	.85	1.49	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of September is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	5	25,847	\$24,410.29	43	246,080	\$254,627.50
Ballast.....	45	257,390	185,502.48	1	3,892	2,802.24
General cargo ships:						
Laden.....	159	813,833	725,171.20	174	836,278	769,633.40
Ballast.....	28	130,278	94,350.86	2	426	312.36
Noncargo-carrying ships:						
Lighthouse tender.....	1	400	293.25			
Total.....	238	1,227,748	1,029,728.08	220	1,086,676	1,027,375.50
Method of propulsion:						
Steam.....	173	856,975	739,857.97	153	757,763	720,505.99
Motor.....	65	370,773	289,870.11	65	328,807	306,742.31
Nonpropelled.....				2	106	127.20
Total.....	238	1,227,748	1,029,728.08	220	1,086,676	1,027,375.50

Of the 326 steam-driven vessels, 239 were oil burning, 85 coal burning, and 2 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of September, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cruisers.....	1	3,200	\$1,600.00			
Minesweepers.....	1	950	475.00	1	950	\$475.00
Submarines.....	3	2,606	1,303.00	4	3,482	1,741.00
Survey ships.....	1	2,600	1,300.00	1	2,600	1,300.00
Tankers.....	1	6,258	4,693.50			
Tugs.....	2	2,000	1,000.00	2	2,000	1,000.00
U. S. Army vessels:						
Mineplanters.....	1	1,208	604.00	1	1,208	604.00
Transports.....	1	3,908	4,885.00	3	11,724	14,655.00
Tugs.....	1	46	34.50	1	46	34.50
U. S. Department of Commerce vessels:						
Lightships.....				1	1,000	500.00
Total, U. S. Government.....	12		15,895.00	14		20,309.50
Vessels for repairs:						
Tankers.....	1	1,645	1,233.75			
Grand total.....	13		17,128.75	14		20,309.50

* Indicates displacement tonnage.

* Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of September, 1930, carried cargo as follows: Atlantic to Pacific, 356 tons; Pacific to Atlantic, 438 tons; total, 794 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of September, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	13	150	\$168.12
Pacific to Atlantic.....	2	5	5.55
Total.....	15	155	173.67

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of September, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	56,159	19,688	75,847
Local cargo shipped..... tons..	7,594	1,320	8,914
Transit cargo arriving..... tons..	2,035,504	2,062,442	4,097,946
Transit cargo clearing..... tons..	2,032,069	2,037,636	4,069,705
Cargo received for transshipment..... tons..	21,557	1,953	23,510
Cargo transhipped..... tons..	20,412	1,520	21,932
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	106	33	139
Number of releases issued.....	688	193	881
Tons received.....	1,407	620	2,027
Tons withdrawn.....	1,659	643	2,302
Packages received.....	6,704	3,812	10,516
Packages withdrawn.....	6,546	3,886	10,432
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Co.....	37		37
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,321		15,321
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	77	6	83
U. S. Army, including vessels..... tons..	41	12	53
Individuals and companies..... tons..	203		203
Transferred to Army..... tons..	18		18
Total sales and issues..... tons..	15,660	18	15,678

		Cristobal.	Balboa.	Total.
Coal on hand, September 1, 1930.....	tons..	93,345		93,345
Coal on hand, October 1, 1930.....	tons..	77,685		77,685
Coal received from Army.....	tons..		18	18
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments.....	bbls.	8,109.94	9,663.07	17,743.01
U. S. Army and Navy.....	bbls.	485.30	115.45	600.75
Individuals and companies.....	bbls.		146.43	146.43
Total sales and issues.....	bbls.	8,595.24	9,894.95	18,490.19
Fuel oil on hand, October 1, 1930.....	bbls.	57,314.54	79,082.85	136,397.39
Diesel oil issued and sold during September, 1930.....	bbls.		2,586.08	2,586.08
Diesel oil on hand, October 1, 1930.....	bbls.	1,082.50	12,018.89	13,101.39
Miscellaneous transfers.....	bbls.	174.88	602.32	777.20
Gasoline and kerosene pumped for The Panama Canal.....	bbls.	1,866.71	4,134.43	6,001.14
Gasoline pumped for individuals and companies.....	bbls.	750.84	5,957.26	6,708.10
Oil pumped for individuals and companies:				
Receipts.....	bbls.	269,443.97	80,574.45	350,018.42
Issues.....	bbls.	259,874.96	131,277.63	441,152.64
Oil pumped for U. S. Navy.....	bbls.	1,024.00	1,941.00	2,965.00
Total fuel oil, gasoline, and kerosene handled.....	bbls.	541,730.60	286,968.17	828,698.77
Admeasurement of vessels:				
U. S. equivalent certificates issued.....		20	1	21
Remeasured for Panama Canal net tonnage.....		24	1	25
Panama Canal net tonnage corrected.....		2	6	8
U. S. equivalent tonnage corrected.....		9	17	26
Services of harbor equipment:				
Tugs, total operating hours.....		310½	186½	497½
Launches, total operating hours.....		1,238½	1,327½	2,566
Revenue from tug service, pilotage, etc.:				
Tug revenue.....		\$10,415.00	\$6,343.75	\$16,758.75
Pilotage.....		17,013.00	7,490.00	24,503.00
Seamen.....		11,212.00	10,176.00	21,388.00
Launch service.....		1,771.50	2,861.00	4,632.50
Wharfage.....		15,212.34	5,365.98	20,578.32
Ships measured.....			5.00	5.00
Miscellaneous.....		232.15	322.00	554.15
Ships repaired at Panama Canal shops:				
Commercial.....		43	6	49
U. S. Army and Navy.....		7	5	12
Panama Canal equipment.....		2	11	13
Total.....		52	22	74
Vessels dry docked:				
Commercial.....		6	1	7
U. S. Army and Navy.....		1	2	3
Panama Canal equipment.....			4	4
Total.....		7	7	14
Clearances issued.....		270	246	516
Bills of health issued.....		272	248	520

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.....	515	3,228,367	1,947,922	418	2,596,576	1,580,193
Vessels entering port but not transiting Canal.....	65	338,799	201,521	8	34,078	20,523
Vessels transiting Canal and handling passengers and cargo at terminal port.....	118	808,325	494,238	98	646,822	390,350
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.....	510	3,192,902	1,928,687	414	2,559,192	1,557,945
Vessels clearing port but not transiting Canal.....	61	309,458	186,013	7	29,330	17,598
Vessels transiting Canal and handling passengers and cargo at terminal port.....	117	802,201	490,511	97	631,885	381,358

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	1,329	876	2,205	118	264	382
From Pacific ports	168	113	281	344	256	600
Total disembarking	1,497	989	2,486	462	520	982
Embarking:						
For Atlantic ports	1,057	865	1,922	209	381	590
For Pacific ports	170	172	342	204	187	391
Total embarking	1,227	1,037	2,264	413	568	981
Remaining on board:						
From Atlantic to Pacific ports	1,260	1,446	2,715	1,473	1,785	3,258
From Pacific to Atlantic ports	1,529	1,192	2,731	1,485	1,511	2,996
From Atlantic to Atlantic ports	313	76	389			
From Pacific to Pacific ports				6	150	156
Total remaining on board	3,111	2,714	5,835	2,964	3,446	6,410
Total arriving	4,618	3,703	8,321	3,426	3,966	7,392
Total departing	4,348	3,751	8,099	3,377	4,014	7,391

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	238	57	23.9
Pacific to Atlantic	220	60	27.3
Total	458	117	25.5

In addition to the aforesaid, 50 passenger-carrying vessels called at the port of Cristobal and 6 at Balboa without transiting the Canal, making a total of 173 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of September, 1930, 39 commercial airplanes entered and 36 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of September, 1930:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$2,220.93	\$11,915.40	\$21,647.90	\$123.62	\$6,150.86	\$42,058.71
Government vessels	97.80	545.25	3,494.98	58.15	588.05	4,784.23
P. R. R. vessels	3.60	191.14	744.78	889.00	186.32	2,014.84
Total sales, September, 1930.	2,322.33	12,651.79	25,887.66	1,070.77	6,925.23	48,857.78
Total sales, September, 1929.	3,172.86	12,942.67	47,083.21	1,067.66	7,533.48	71,799.88
Total sales, September, 1928.	2,621.47	11,753.13	34,872.43	991.68	6,872.80	57,111.51
Sales at Balboa to:						
Commercial vessels	465.52	918.29	19,145.20	629.01	9,871.38	22,029.40
Government vessels	158.40	914.26	9,250.31	523.01	788.92	11,634.90
P. R. R. vessels				57.35		57.35
Total sales, September, 1930.	623.92	1,832.55	19,395.51	1,209.37	10,660.30	33,721.65
Total sales, September, 1929.	1,189.90	11,298.28	22,114.96	629.91	4,782.86	40,015.91
Total sales, September, 1928.	1,518.80	11,893.34	37,534.14	1,342.33	5,917.72	58,206.33

The aggregate sales to Government vessels during the month were \$16,419.13; to Panama Railroad vessels, \$2,072.19; and to other commercial vessels, \$64,088.11, making the total sales to all vessels, \$82,579.43. The figures shown are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of September, 1930, as compared with the corresponding month in 1928 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial.*			Sept., 1928.	Sept., 1929.	Sept., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	208	230	438	11	8	19	475	507	457
Pedro Miguel.....	213	236	449	14	10	24	499	535	473
Miraflores.....	213	234	447	12	12	24	493	530	471
Number of vessels put through locks.									
Gatun.....	218	238	456	38	36	74	543	583	530
Pedro Miguel.....	221	238	459	34	29	63	579	622	522
Miraflores.....	219	238	457	33	29	62	577	619	519

* Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	35	34	34
Panama Canal equipment.....	14	25	25
Vessels for repairs.....	1	1	1
Launches.....	24	3	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in September, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,867,290,000	1,476,310,000	1,395,470,000
Maintenance.....	5,710,000		
Leakage.....	40,000,000	13,500,000	20,000,000
Total, September, 1930.....	1,913,000,000	1,489,810,000	1,415,470,000
Total, August, 1930.....	1,924,880,000	1,488,200,000	1,451,080,000
Total, September, 1929.....	2,073,300,000	1,700,940,000	1,612,780,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of September, 1930, are shown in comparative form, in the following tabulation:

	September.		September—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 2,389	<i>C. f. s.</i> 2,696	<i>C. f. s.</i> 5,022	<i>C. f. s.</i> 1,722	<i>C. f. s.</i> 3,169
Maximum momentary discharge for the month.....	9,375	36,180	36,180		
Gatun Lake watershed, total yield.....	6,548	6,507	11,946	6,507	8,831
Gatun Lake watershed, net yield.....	5,945	5,974	11,238	5,945	8,252
Draft on Gatun Lake for lockages and power.....	2,917	2,780	2,917	2,322	2,321

* September 25, 1930.

* 1914 excluded.

* Full load.

The monthly mean discharge of the Chagres River at Alhajuela for September, 1930, was 2,696 c. f. s., which is 15 per cent below the 29-year average of 3,169 c. f. s. The maximum monthly mean discharge on record for September is 5,022 c. f. s. in 1927, and the minimum is 1,722 c. f. s. in 1905.

Gatun Lake varied in elevation during September from a minimum of 85.04 feet on the 1st, to a maximum of 86.16 feet on the 29th, and averaged 85.60 feet. The elevation at midnight on August 31 was 85.08 feet and at midnight on September 30, 86.02 feet, showing a net rise during the month of 0.94 foot. The total yield of Gatun Lake watershed was 6,507 c. f. s., which is 26 per cent below the 17-year September average of 8,831 c. f. s., and the lowest during the period of record for September. The maximum total yield for September is 11,946 c. f. s. in 1917.

Miraflores Lake varied between elevation 53.05 feet on the 2d, and 54.45 feet on the 30th. The mean elevation for the month was 53.77 feet. At midnight on the 30th the elevation was 53.86 feet.

SEISMOLOGY.

Two small seismic disturbances were recorded during the month, on the 26th and 27th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,977,600 kilowatt hours, and the computed water consumption was 3,853,339,970 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,900 kilowatt hours, and the fuel oil consumption was 14.03 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 422 work orders issued during the month, as compared with 402 issued during the previous month.

MECHANICAL DIVISION.

During the month of September, 1930, miscellaneous repairs were made on 52 vessels at Cristobal and 22 at Balboa. Seven vessels were dry-docked at Cristobal and 7 at Balboa. The general overhaul of the United States Army tug *General G. W. Getty* was completed during the month. Lightship *No. 114* of the Department of Commerce was at the Balboa shops for repairs to engine. The United States Navy tug *Sciota* entered dry dock for general overhaul and work was carried forward. The repairs and alterations to the United States Navy's submarine *S-10* neared completion at the end of the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the Canal to the Zone boundary near Arraijan 8,100 feet were cleared, 15,886 cubic yards of grading were performed, and 6 concrete culverts were constructed. The retaining walls were 30 per cent complete at the end of the month.

In connection with the improvements around the Naval Air Station, at Coco Solo, 685 cubic yards of earth were excavated and 4,000 square yards graded.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 721,561,750 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of one foot toward the Canal between stations 1770-00 and 1794-00 W., and 0.3 foot southward between stations 1772-00 and 1775-00 W. The reference points on this slide showed a small movement. West Lirio slide was active during September, a dredge working 21 days in connection therewith between stations 1732-00 and 1744-00 W., excavating 73,000 cubic yards. There was a slight surface movement at Southwest La Pita slide during the month. There was no interference to shipping on account of slides during the month.

A suction dredge worked 17 days in Folks River borrow pit, excavating 40,500 cubic yards for the France Field fill, and 18,000 cubic yards of sand, coral and silt, for a stock pile, completing work on these projects.

The total excavation during September, 1930, was 842,590 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Atlantic entrance—			
Maintenance.....	91,000	.....	91,000
Gaillard Cut—			
West Lirio slide.....	15,300	57,700	73,000
Maintenance.....	5,750	.....	5,750
Project No. 3.....	3,200	18,100	21,300
Pacific entrance—			
Project No. 1.....	250,000	48,800	298,800
Maintenance.....	273,150	18,000	291,150
Plant excavation:			
France Field.....	40,500	.....	40,500
Dredging sand at Chame.....	3,090	.....	3,090
France Field stock pile.....	18,000	.....	18,000
Total.....	699,990	142,600	842,590

The ferry crossing at the north end of Pedro Miguel locks operated 30 days during the month. One thousand three hundred and twenty trips were made, and 174 Panama Canal, 50 United States Army, and 5,053 other vehicles, a total of 5,277, were ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Two hundred ninety-five linear feet of tunnelling along open seams were completed during the month. Tunnel work is being carried on in two 8-hour shifts. One hundred and nineteen linear feet of test pits for earth and rock investigations were completed during the month. Geological mapping was carried on. Sampling for earth dam material was completed. Forty-one samples were sent to the laboratory for analysis. Five hundred and six linear feet of drilling with diamond and shot drills was completed during the month.

Surveys for transmission line from Summit to Madden Dam were completed from Madden Dam to the Canal Zone boundary, and were started from the boundary to Summit. Profiles were plotted and towers located for that part of the line which had been surveyed. Drawings for the structural steel towers were made and specifications prepared for purchase. Compression tests were made at Miraflores laboratory of stone from 6-inch shot drill cores and several 2-inch diamond drill cores. Permeability tests were made from 2-inch cores. Quantitative test for clay in stone at dam site was partly completed. Permeability tests of concrete were reported. Observations of water table, silt analysis, and stream gauging were continued. The flood warning stations at Salamanca on Rio Pequeni and at Rio Indio on the Chagres were put in operation on September 9th for the remainder of the flood season. Studies were continued for the main dam, power plant, spillway, transmission line, substation and switching station at Summit. Work was performed on base maps for dam site and camp site.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on September 30, 1930, was 23,328, composed of 7,945 Americans, 2,841 of whom were men, 2,406 women, and 2,698 children; 184 Europeans, 82 of whom were men, 30 women, and 72 children; and 15,199 West Indians, 4,212 of whom were men, 2,718 women, and 8,269 children. The total number of persons in quarters on September 30, 1929, was 22,016.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of September 17, 1930, with a comparison of the working force for the preceding month and for September, 1929:

	Total employees.		As of September 17, 1930.		
	September, 1929.	August, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	104	127	56	63	119
Electrical.....	311	337	162	201	363
Municipal Engineering.....	857	1,105	98	1,122	1,220
Lock operation.....	957	942	241	715	956
Dredging.....	1,251	1,168	193	938	1,136
Madden Project.....	796	288	24	229	253
Mechanical.....	1,452	1,402	496	899	1,395
Marine.....	908	766	202	580	782
Fortifications.....	297	178	20	229	249
Total.....	6,933	6,313	1,497	4,976	6,473
Supply Department:					
Quartermaster.....	2,312	2,086	213	1,693	1,906
Commissary.....	1,519	1,579	240	1,353	1,593
Cattle Industry—Plantations.....	117	94	2	95	97
Hotel Tivoli.....	113	112	8	108	116
Hotel Washington.....	108	103	9	97	106
Transportation.....	290	329	77	248	325
Total.....	4,459	4,303	549	3,594	4,143
Accounting Department.....	203	210	203	6	209
Health Department.....	1,282	1,159	287	842	1,129
Executive Department.....	835	861	525	332	857
Total.....	2,320	2,230	1,015	1,180	2,195

	Total employees.		As of September 17, 1930.		
	September, 1929.	August, 1930.	Gold.	Silver.	Total.
Panama Railroad Company:					
Superintendent.....	343	305	49	255	304
Transportation.....	190	189	67	122	189
Receiving and Forwarding Agency.....	1,783	1,306	82	1,061	1,143
Coaling Stations.....	292	279	43	225	268
Total.....	2,698	2,079	241	1,663	1,904
Grand total, September, 1929.....	16,320				
Grand total, August, 1930.....		14,925			
Grand total, September, 1930.....			3,302	11,413	14,715

Additions to the gold force on the Isthmus were as follows: Employed in the United States, 3; reemployed in the United States, 2; employed on the Isthmus, 15; re-employed on the Isthmus, 17; total, 37. Separations from the gold force totaled 44, as follows: Resigned, 25, discharged, 10; retired, 9. At the end of the month there were on file 675 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 182 deaths occurred during the month of September, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 15.21 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 30; tuberculosis (various organs), 24; organic diseases of the heart, 11; diarrhea and enteritis, 11; and cancer, 10. There were 9 deaths from apoplexy, 8 from nephritis, 6 from syphilis, and 2 from typhoid fever. There were 20 deaths among nonresidents. These are not included in the above statistics.

There were 349 live births and 15 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.41. Deaths among children under 1 year of age numbered 39, giving an infant mortality rate based on the number of live births reported, of 111.75.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 134, of whom 16 were employees (3 white and 13 colored), 15 were members of employees' families (3 white and 12 colored), 10 were Canal Zone agriculturists, 61 were other civilian nonemployees, and 32 were Army and Navy personnel. Of the 31 employees and members of employees' families, 20 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria among residents.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$367,731.77 of which \$346,094.29 was for the Department of Operation and Maintenance, and \$21,637.48 for other Panam Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$35,624.07.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of August, 1930, as compared with August, 1929, with the figures for the first two months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of September at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	August, 1929.	August, 1930.	To end of August	
			Last year.	This year.
Tolls.....	\$2,327,477.01	\$2,080,327.92	\$4,587,058.88	\$4,259,708.44
Other receipts.....	351,922.88	334,223.70	717,931.31	675,917.01
Total transit revenues.....	2,679,399.89	2,414,551.62	5,304,990.19	4,935,625.45
Total transit expenses.....	1,080,911.94	1,132,943.84	2,178,848.46	2,211,603.93
Net transit revenues.....	1,598,487.95	1,281,607.78	3,126,141.73	2,724,021.52
Three per cent capital charge.....	620,655.94	625,683.92	1,240,761.32	1,251,367.84
Transit surplus.....	977,832.01	655,923.86	1,885,380.41	1,472,653.68
Business revenues.....	1,470,541.90	1,571,062.19	3,245,897.18	3,594,010.87
Business expenses.....	1,397,153.92	1,506,083.93	3,070,375.15	3,473,968.01
Net business revenues.....	73,387.98	64,978.26	175,522.03	120,042.86
Three per cent capital charge.....	61,608.90	64,968.36	123,128.49	129,936.72
Business surplus.....	11,779.08	9.90	52,393.54	9,893.86
Combined revenues.....	4,149,941.79	3,985,613.81	8,550,887.37	8,529,636.32
Combined expenses.....	2,478,065.86	2,639,027.77	5,249,223.61	5,685,571.94
Net revenues.....	1,671,875.93	1,346,586.04	3,301,663.76	2,844,064.38
Three per cent capital charge.....	682,264.84	690,652.28	1,363,889.81	1,381,304.56
Combined surplus.....	989,611.09	655,933.76	1,937,773.95	1,462,759.82

¹ Denotes deficit.

Respectfully,

H. BURGESS.
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 18, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....	October 12.....	October 12.....		787
Ebro.....	Pacific Steam Navigation Co.....	October 12.....	October 12.....		95
Oroya.....	Pacific Steam Navigation Co.....	October 12.....	October 12.....		(²)
Champerico.....	Pacific Steam Navigation Co.....	October 17.....	October 17.....		672
Manizales.....	North German Lloyd.....	October 18.....	October 18.....		152
Tolosa.....	United Fruit Co.....	October 12.....	October 12.....	27	262
Cauca.....	United Fruit Co.....	October 12.....	October 12.....	166	
Donau.....	North German Lloyd.....	October 13.....	October 13.....	(¹)	273
Santa Rita.....	Grace Line.....	October 13.....	October 13.....	196	1
Nora.....	Grace Line.....	October 13.....	October 14.....	14,226	(²)
Sulairia.....	Donaldson Brothers.....	October 13.....	October 15.....	(¹)	350
Perou.....	French Line.....	October 13.....	October 15.....	185	1,236
Pastores.....	United Fruit Co.....	October 13.....	October 15.....	683	12
Wyoming.....	French Line.....	October 14.....	October 14.....	86	200
Axel Johnson.....	Johnson Line.....	October 14.....	October 14.....	(¹)	400
Baarn.....	Royal Netherlands S. S. Co.....	October 14.....	October 15.....	254	65
Lorgia.....	Pacific Steam Navigation Co.....	October 14.....	October 15.....	55	27
Counsellor.....	T. & J. Harrison.....	October 14.....	October 16.....	459	(²)
Santa Clara.....	Grace Line.....	October 15.....	October 15.....	86	(²)
Venezuela.....	Royal Netherlands S. S. Co.....	October 15.....	October 15.....	93	2
Benjamin Franklin.....	Fred Olsen & Co.....	October 15.....	October 15.....	(¹)	272
Metapan.....	United Fruit Co.....	October 15.....	October 16.....	616	477
Iriona.....	United Fruit Co.....	October 15.....	October 16.....	1,229	(²)
Vinland.....	O. A. Knutson.....	October 15.....	October 16.....	(¹)	70
Araña.....	Pacific Steam Navigation Co.....	October 16.....	October 16.....	272	(²)
Drechtijk.....	Pacific Steam Navigation Co.....	October 16.....	October 16.....	15	27
Emil Kerdorf.....	Hamburg-American Line.....	October 16.....	October 17.....	335	74
Cellina.....	Panama R. R. S. S. Line.....	October 16.....	October 17.....	151	(²)
Bridgetown.....	United Fruit Co.....	October 17.....	October 17.....	27	70
Esequeibo.....	Pacific Steam Navigation Co.....	October 17.....	October 17.....	10	10
Venezuela.....	Royal Netherlands S. S. Co.....	October 17.....	October 18.....	2	118
Seattle.....	Hamburg-American Line.....	October 17.....	October 18.....	138	397
Amapala.....	Standard Fruit Co.....	October 17.....	October 18.....	154	380
Knute Nelson.....	Fred Olsen & Co.....	October 17.....	October 18.....	327	(²)
Lochmonar.....	Royal Mail Steam Packet Co.....	October 17.....	October 18.....	28	286
Rugia.....	Hamburg-American Line.....	October 18.....	October 18.....	14	17
Iriona.....	United Fruit Co.....	October 18.....	October 18.....	(¹)	276
Belray.....	Aluminium Line.....	October 18.....	October 18.....	130	(²)

¹ No cargo discharged.

² No cargo laded.

"Reina del Pacifico" Launched.

The Pacific Steam Navigation Company has announced the launching of the *Reina del Pacifico*, combination freight and passenger steamer to be used in its service between Liverpool and the west coast of South America, via the Panama Canal. Of 17,300 gross tons, the new vessel is 550 feet long and 76 feet beam, and has accommodations for 880 passengers in first, second, and third classes. She is of the straight stem and cruiser stern type with three superstructure decks above a continuous fore and aft shelter deck.

It is stated that the new ship will make the run between Liverpool and Valparaiso in 29 days, or 6 days less than the steamers now in the service.

Sale of Diesel Oil at Cristobal by Arrow Oil Company.

The Arrow Oil Company, which is a subsidiary of W. R. Grace & Company and has sold fuel oil at both ends of the Canal and Diesel oil at Balboa for a number of years, has made arrangements for the sale of Diesel oil at Cristobal. No new tanks are being devoted to the storage of Diesel oil but delivery from the stock of another company may be made for account of the Arrow Company to customers of the latter.

Diesel oil is now for sale at Cristobal by two companies and at Balboa by five.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending October 25, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Annie Johnson.....	Johnson Line.....	October 12....	October 13....	141	.....
Santa Rita.....	Grace Line.....	October 13....	October 13....	68	.....
San Simeon.....	Quaker Line.....	October 13....	October 17....	536	536
Ginyo Maru.....	Nippon Yusen Kaisha.....	October 14....	October 14....	86	14
Santa Clara.....	Grace Line.....	October 15....	October 15....	113	.....
Baarn.....	Royal Netherlands S. S. Co.....	October 15....	October 15....	103	.....
Loriga.....	Pacific Steam Navigation Co.....	October 15....	October 15....	.....	50
Somme.....	U. S. Government.....	October 16....	October 17....	52	4
City of Panama.....	Panama Mail S. S. Co.....	October 16....	October 16....	124	.....
California.....	Panama-Pacific Line.....	October 17....	October 17....	.....	172
Emil Kirdorf.....	Hamburg-American Line.....	October 18....	October 18....	199	35
Knute Nelson.....	Fred Olsen & Co.....	October 18....	October 18....	512	.....
Sapelo.....	U. S. Government.....	October 19....	October 19....	10,233	.....
Cauca.....	National Navigation Co.....	October 18....	October 19....	.....	70
Saramacca.....	United Fruit Co.....	October 18....	October 19....	761	62
Panama.....	East Asiatic Co.....	October 20....	October 20....	6	.....
City of Panama.....	Panama Mail S. S. Co.....	October 20....	October 20....	.....	71
Santa Tecla.....	N. O. & S. A. S. S. Co.....	October 20....	October 21....	.....	77
Kenowis.....	U. S. Government.....	October 21....	October 23....	474	13
Santa Teresa.....	Grace Line.....	October 21....	October 21....	.....	7
Colombia.....	Panama Mail S. S. Co.....	October 21....	October 22....	64	3
Mojave.....	General Petroleum Co.....	October 21....	October 22....	10,286	.....
Guatemala.....	Panama Mail S. S. Co.....	October 21....	October 22....	86	15
Parana.....	Royal Mail Steam Packet Co.....	October 21....	October 22....	467	.....
San Mateo.....	United Fruit Co.....	October 23....	October 24....	197	.....
Tai Ping.....	Barber S. S. Lines.....	October 25....	October 25....	255	.....
Fort Armstrong.....	Charles Nelson & Co.....	October 24....	October 26....	655	.....
La Placentia.....	Union Oil Co.....	October 24....	October 26....	10,853	12

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, October 25, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Draft.			Nature.	Tons.	Gross.	Net.
Hanley	19	1 25	19	6 15	19	13 14	19	14 45	American.	Hanley S. S. Co.	440.0	56.0 17.0	Baltimore, Md.	Everett, Wash.	6,880	8,310	6,005
Selma City	19	3 05	19	6 25	19	14 06	19	15 15	American.	Isthmian S. S. Lines	420.0	56.0 24.6	Baltimore, Md.	Vancouver, B. C.	7,611	9,480	5,450
Leverbank	19	7 00	19	7 35	19	14 53	19	18 20	British.	Bank Line, Ltd.	420.0	54.0 24.6	Hongkong, China.	Cisco oil, general.	7,662	7,093	5,021
S-20	19	7 00	19	7 35	19	15 24	19	20 00	American.	U. S. Navy	219.0	62.7 20.0	Boston, C. Z.	Balboa, C. Z.	10,084	7,388	7,388
Japan Arrow	19	16 55	19	17 35	20	9 29	20	10 33	American.	Standard Transp. Co.	408.3	62.8 20.0	Cristobal, C. Z.	Balboa, C. Z.	11,556	7,772	5,911
Canadotte	19	18 05	19	19 25	20	11 46	20	17 35	British.	Imperial Oil Co.	510.7	62.7 24.11	New York, N. Y.	Talara, Peru	5,870	7,982	5,911
Hanover	19	18 05	19	20 25	20	14 16	20	15 30	American.	Tampa Intercoastal Co.	435.0	57.6 24.11	New Orleans, La.	General, cotton.	2,899	7,027	5,341
Yamato	20	6 35	20	10 10	20	16 34	20	17 35	Danish.	East Asiatic Co.	440.0	58.0 18.3	Copenhagen, Den.	Gen., salt, sand.	7,675	7,799	5,484
Toyama Maru	20	8 10	20	11 20	20	16 03	20	20 09	Japanese.	Nippon Yusen Kaisha.	415.0	58.0 26.9	Baltimore, Md.	Kobe, Japan	5,539	4,112	2,846
Mallamak	20	11 15	20	11 25	20	19 40	20	21 00	American.	Mallory Transport Co.	333.8	48.0 24.0	Freeport, Tex.	Oakland, Calif.	6,888	4,961	4,961
Swan	20	14 50	20	6 20	20	14 16	20	18 00	American.	U. S. Navy	180.0	35.6	Cristobal, C. Z.	Balboa, C. Z.	6,782	4,937	4,937
Rainbow	20	14 50	20	17 55	21	11 10	21	12 40	British.	Dale & Co.	426.0	57.0 18.0	Savona, Italy	Vancouver, B. C.	4,052	6,082	4,236
Texas	20	20 30	20	20 45	21	9 07	21	10 25	American.	The Texas Co.	417.0	56.1 20.0	Port Antonio, N. J.	Los Angeles, Calif.	13,392	9,918	7,363
Skranstad	20	22 25	21	6 20	21	13 10	21	14 55	Norwegian.	Fern Line.	382.0	65.0 27.0	Chesler, Pa.	Los Angeles, Calif.	1,612	5,726	4,086
Sun	21	6 15	21	6 40	21	13 45	21	14 55	American.	Sun Oil Co.	480.6	66.0 31.0	Aruba, D. W. I.	Los Angeles, Calif.	1,200	4,822	3,272
Nora	21	7 05	21	7 35	21	15 34	21	18 05	American.	Arrow Oil Co.	407.6	62.7 30.6	Tampa, Fla.	Los Angeles, Calif.	1,731	5,776	4,081
Atlantic Sun	21	8 50	21	9 00	21	16 22	21	17 35	American.	Sun Oil Co.	429.3	59.2 19.0	New York, N. Y.	Los Angeles, Calif.	3,619	4,717	3,359
Santa Teresa	21	3 20	21	11 35	21	17 27	21	22 30	American.	Grace Line	350.2	51.6 22.0	New York, N. Y.	Talcahuano, Chile	2,920	4,557	3,326
Virid	21	11 20	21	12 10	21	19 21	22	00 10	Norwegian.	Anglo-Saxon Pet. Co.	420.0	57.0 15.9	Havana, Cuba.	Los Angeles, Calif.	3,820	6,063	4,482
Minden	21	17 05	21	13 15	21	20 29	21	21 30	German.	North German Lloyd	360.7	51.6 16.9	Bremen, Germany	Champerico, Guat.	1,875	7,380	5,339
Guatemala	20	5 15	21	14 35	21	21 25	22	19 40	American.	Panama Mail S. S. Co.	360.2	51.6 23.7	New York, N. Y.	San Francisco, Cal.	3,311	8,982	6,274
Parana	20	18 30	21	14 45	21	21 58	23	00 10	British.	Royal Mail S. S. P. Co.	375.0	48.3 20.1	London, England	Portland, Oreg.	7,652	6,336	4,301
Konigsberg	21	6 25	21	15 32	21	23 10	22	3 01	German.	North German Lloyd	431.4	56.3 18.10	Hamburg, Germany	Valparaiso, Chile	2,909	3,212	1,180
El Lobo	21	6 25	21	18 15	22	9 26	22	10 57	British.	Atlantic Refining Co.	385.2	51.0 18.0	Philadelphia, Pa.	La Libertad, Ecuador	8,825	13,592	9,383
San Vicente	21	17 45	22	6 15	22	13 00	22	15 30	American.	Quaker Line	410.5	54.3 18.5	Philadelphia, Pa.	Tacoma, Wash.	3,307	17,146	12,015
Edwin	22	1 40	22	6 15	22	13 53	22	15 00	American.	Arrow Line	410.0	54.2 18.4	Jacksonville, Fla.	San Francisco, Cal.	1,545	10,494	7,146
Christenson	22	8 30	22	7 10	22	16 13	22	15 40	American.	Amer-Hawaiian Line	415.0	53.7 18.9	Boston, Mass.	Seattle, Wash.	6,947	5,358	5,358
Alaskan	22	8 40	22	7 10	22	16 13	22	17 15	American.	Osaka Shosen Kaisha	445.0	60.0 20.8	Boston, Mass.	Seattle, Wash.	3,689	11,487	8,762
Tokai Maru	22	8 40	22	10 05	22	16 13	22	17 15	Japanese.	Osaka Shosen Kaisha	445.0	60.0 20.8	Boston, Mass.	Seattle, Wash.	7,652	6,336	4,301
Lewis	22	16 15	22	16 30	23	9 27	23	10 30	American.	Lockenbach Line	496.0	68.2 22.0	Boston, Mass.	Seattle, Wash.	2,909	3,212	1,180
Illinois	22	6 45	23	6 00	23	13 23	23	14 55	French.	French Line	400.0	51.0 16.8	Haute, France	Corral, Chile	8,825	13,592	9,383
Leise Maerk	22	7 10	23	7 30	23	14 24	23	15 50	Danish.	A. P. Moller	302.2	44.0 19.0	New York, N. Y.	Manila, P. I.	3,307	17,146	12,015
Tamora	22	9 15	23	9 25	23	16 07	24	7 05	British.	Shaw, Savill & Albion	500.0	63.0 27.6	London, England	Auckland, N. Z.	288	101	101
El Porquico	22	13 05	23	10 25	23	17 51	24	22 40	Panamaian	Panamaian Gov't	125.0	67.0 23.6	London, R. P.	Panama, R. P.	3,307	17,146	12,015
Orduna	22	13 45	23	10 25	23	17 38	23	18 48	British.	Pacific Steam Nav. Co.	550.0	67.0 23.6	Liverpool, England	Talcahuano, Chile	1,545	10,494	7,146
Wisconsin	23	1 25	23	12 15	23	19 04	23	20 18	French.	French Line	470.0	61.3 20.9	Dunkirk, France	Vancouver, B. C.	6,947	5,358	5,358
Tacoma City	22	8 25	23	14 50	23	21 42	23	22 51	British.	Reardon Smith Line	400.0	54.3 14.3	Sorel, Canada	Vancouver, B. C.	6,947	5,358	5,358

¹ Tauler. ² Motor ship. ³ Submarine. ⁴ Mine sweeper. ⁵ Transport.

Pacific Grove ¹	21	13.40	24	6.15	24	13.14	24	17.05	British.	Furness, Withy & Co.	450.0	60.6	21.1	Glasgow, Scotland.	Vancouver, B. C.	General, bananas	1,704	10,086	7,226
San Domingo ¹	22	22.05	24	6.15	24	13.22	24	14.40	American.	Williams S. S. Line	376.0	52.3	20.0	Baltimore, Md.	Seattle, Wash.	General	2,783	5,455	3,902
Floreana ¹	22	00.40	24	6.15	24	16.01	24	21.15	Colombian.	Francisco F. Lobato	150.0	27.2	12.0	Rio Haeka, Colom.	Buenaventura, Col.	Salt	625	410	307
Silverstrand ²	23	20.45	24	7.25	24	14.14	24	15.20	British.	S. & J. Thompson	455.0	61.0	21.0	New York, N. Y.	Sourabaya, Java	General	3,795	9,576	6,618
Munster ¹	23	22.20	24	7.35	24	15.05	24	18.49	British.	Barber S. S. Line	428.0	56.0	24.0	Philadelphia, Pa.	Manila, P. I.	Kerosene, general	7,228	7,596	5,159
Castle ²	24	1.30	24	8.40	24	16.14	24	17.20	American.	Richfield Oil Co.	424.8	56.2	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,394	5,099	
Huguenot ¹	23	20.00	24	9.35	24	17.07	24	18.00	Chilean	Ga. Sud Amer. de Vap.	422.0	56.0	23.5	New York, N. Y.	Valparaiso, Chile	General	1,581	7,764	4,672
Teno ¹	24	7.15	24	9.55	24	17.40	24	18.48	British.	Cia. S. S. Co.	400.0	52.3	15.0	Newport News, Va.	Pimental, Peru	Ballast	5,734	4,080	
Tregenna ¹	24	9.35	24	11.10	24	18.16	24	19.30	British.	Northumbrian S. S. Co.	390.0	53.0	15.2	Montreal, Canada	Vancouver, B. C.	Ballast	5,625	4,158	
Simonsburn ¹	24	9.35	24	13.15	24	20.14	25	16.00	American.	N. O. & S. A. S. Co.	300.0	45.0	18.11	New Orleans, La.	Talehuano, Chile	General	1,932	3,256	2,010
Nosa Chief ¹	23	21.05	24	13.15	24	20.14	25	16.00	American.	N. O. & S. A. S. Co.	300.0	45.0	18.11	New Orleans, La.	Talehuano, Chile	General	1,932	3,256	2,010
Montevideo ¹	24	11.00	24	14.30	24	21.31	24	22.40	Japanese.	Oaka, Shosen Kaisha	430.0	56.0	21.0	Buenos Aires, Arg.	Yokohama, Japan	Cotton, hides	3,128	7,875	5,821
Mari ²	24	19.05	24	19.30	25	11.58	25	13.30	American.	San Oil Co.	480.0	66.0	21.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	9,607	6,551	
Eastern Sun ²	24	13.05	24	6.20	25	14.00	25	15.25	Dutch.	United Fruit Co.	315.2	44.2	18.3	San Francisco, Cal.	Los Angeles, Calif.	General	3,496	2,141	
San Mateo ¹	24	13.05	25	6.20	25	14.00	25	15.25	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	11.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	66	1,183	742
Brail ¹	24	13.05	25	6.20	25	14.00	25	15.25	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	11.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	66	1,183	742
Lena ¹	24	21.30	25	6.05	25	13.18	25	14.37	American.	Lukenbach Line	425.0	53.7	24.0	Houston, Tex.	Los Angeles, Calif.	General	5,756	7,217	5,295
David ¹	24	21.30	25	6.05	25	13.18	25	14.37	American.	Lukenbach Line	425.0	53.7	24.0	Houston, Tex.	Los Angeles, Calif.	General	5,756	7,217	5,295
McKelvey ¹	25	2.35	25	7.25	25	16.16	25	17.50	American.	Tidewater Oil Co.	430.0	59.2	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,629	5,325	
Sage Brush ¹	25	7.05	25	7.35	25	18.15	25	18.45	American.	Shepard S. S. Co.	409.0	54.0	18.6	Boston, Mass.	Seattle, Wash.	Steel, general	3,385	6,602	4,754
Normanstar ¹	25	1.45	25	8.15	25	17.12	25	19.15	British.	Blue Star Line	415.0	56.0	19.6	Trinity, England	Vancouver, B. C.	Ballast	7,517	5,458	
Caldas ²	18	21.45	25	8.55	25	17.14	25	21.45	Colombian.	National Navigation Co.	116.0	21.1	9.0	Cristobal, C. Z.	Buenaventura, Col.	General	143	211	124
Santi ¹	25	6.40	25	9.20	25	18.15	25	19.15	Spanish.	Lambert Brothers	331.0	48.0	13.0	Barry, England	Chile	Ballast	3,334	2,098	
West Notus ¹	25	9.20	25	9.45	25	18.55	25	19.55	American.	McCormick S. S. Co.	410.5	54.3	23.7	San Lorenzo, Arg.	Vancouver, B. C.	General	6,936	10,423	7,456
Westmoreland ¹	25	9.50	25	10.10	25	19.10	26	00.04	British.	N. Z. Shipping Co.	473.0	59.6	21.10	London, England	Dunedin, N. Z.	General	1,483	10,423	7,456
Cerigo ¹	19	19.30	25	11.00	25	20.40	25	21.45	German.	Hamburg-American Line	227.0	34.0	14.1	Cristobal, C. Z.	Guayaquil, Ecuador	General	146	1,572	1,011
City of Panama ²	20	17.00	25	11.00	25	20.15	25	21.45	American.	Panama Mail S. S. Co.	296.1	46.0	18.8	Cristobal, C. Z.	San Francisco, Cal.	General	1,335	3,848	2,603
Althequen ¹	25	6.00	25	12.20	25	20.58	25	22.30	British.	United Molasses Co.	471.2	62.0	18.6	New Orleans, La.	Los Angeles, Calif.	Ballast	9,412	6,386	
Point Gorda ¹	25	12.50	25	13.15	25	21.15	25	22.40	American.	Swayne & Hoyt	324.0	46.0	21.0	Corpus Christi, Tex.	Seattle, Wash.	General, lumber	3,141	3,934	2,643

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

⁶ Motor schooner.¹ Tanker.

San Anselmo ¹	18	15.00	19	6.38	19	14.00	19	14.00	American.	States S. S. Co.	410.5	54.2	27.0	Portland, Oreg.	New York, N. Y.	Lumber, general	5,721	6,755	4,887
Tongking ²	19	17.15	19	7.05	19	14.30	19	16.30	Danish.	East Asiatic Co.	410.0	55.2	29.0	Vancouver, B. C.	Copenhagen, Den.	General	8,623	7,013	5,317
Iwatekan Maru ¹	18	4.00	19	7.35	19	15.15	19	16.30	Japanese.	Mitsui Bussan Kaisha	335.0	51.0	28.3	Olympia, Wash.	Gaston, England	Lumber, wheat	7,103	6,230	4,574
Democracy ¹	19	6.35	19	8.50	19	15.45	19	15.45	American.	Charles Nelson & Co.	377.0	52.0	23.2	Los Angeles, Calif.	New York, N. Y.	Lumber	6,003	5,434	3,969
Cerigo ¹	19	11.10	19	12.03	19	19.50			German.	Hamburg-American Line	227.2	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	655	1,572	1,011
Canadian ¹	19	11.45	19	12.18	19	21.00	19	23.15	British.	Can. Nat. Steamships	400.6	52.3	24.0	Vancouver, B. C.	Montreal, Canada	Lumber, general	5,910	5,893	4,182
Seigneur ¹	19	12.50	20	6.09	20	17.40	20	17.40	American.	Pennsylvania Ship. Co.	432.6	56.2	23.3	Los Angeles, Calif.	Fall River, Mass.	Lumber, general	10,351	7,426	5,073
Antietam ¹	19	23.10	20	6.31	20	15.05	20	17.35	Norwegian.	Westfal, Larsen & Co.	415.0	54.9	19.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	3,692	6,853	5,246
Brimmer ²	19	23.10	20	6.31	20	15.05	20	17.35	Norwegian.	Westfal, Larsen & Co.	415.0	54.9	19.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	3,692	6,853	5,246
E. J. Hooper ²	19	23.10	20	6.31	20	15.05	20	17.35	Norwegian.	Westfal, Larsen & Co.	415.0	54.9	19.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general	3,692	6,853	5,246
Canadian ¹	20	3.00	20	7.28	20	15.30	20	15.30	British.	E. J. Hooper	400.0	52.3	19.0	Balboa, C. Z.	Cristobal, C. Z.	Towing barge			
No. 3 ¹	20	3.00	20	7.28	20	15.30	20	15.30	British.	E. J. Hooper	400.0	52.3	19.0	Balboa, C. Z.	Cristobal, C. Z.	Towing barge			
Explorer ¹	20	8.06	20	9.04	20	16.55	20	20.10	American.	Can. Nat. Steamships	400.0	52.3	19.0	Brisbane, Australia	Montreal, Canada	Nitrate of soda	3,749	5,853	4,099
Steel Engineer ¹	20	8.06	20	9.04	20	16.55	20	20.10	American.	Isthmian S. S. Lines	424.2	50.2	26.0	Tooeopila, Chile	Wilmington, N. C.	Nitrate of soda	8,700	7,611	5,450
City of ¹	20	5.50	20	10.20	20	17.00			American.	Panama Mail S. S. Co.	296.0	46.9	16.2	Buenaventura, Col.	Cristobal, C. Z.	General	415	3,348	2,603
Panama ²	20	5.50	20	10.20	20	17.00			American.	Panama Mail S. S. Co.	296.0	46.9	16.2	Buenaventura, Col.	Cristobal, C. Z.	General	415	3,348	2,603

⁸ Fruits, wool, and hides.⁹ Gasoline and kerosene.⁷ Launch.¹ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Santa Eulalia..	20	7.00	20	11.26	20	19.00	20	19.00	American.	Amer. & Cuban S. S. Co.	251.0	43.6	23.0	Honolulu, T. H.	Baltimore, Md.	Sugar.	3,304	2,823	1,730
S-15 ..			20	12.35	20	19.00			American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-17 ..			20	12.35	20	19.00			American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Harlem ..	20	13.15	20	14.03	20	21.43	21	11.30	Dutch.	Royal Neth. S. S. Co.	375.0	51.2	25.0	Valparaiso, Chile	Hamburg, Germany	Nitrate, general.	5,115	4,759	3,660
Taijin Maru ..	20	14.00	20	14.53	20	22.30	20	22.30	Japanese.	Shimomura K. Kaisha.	375.0	51.2	25.0	Portland, Ore.	Cobh, Ireland	Wheat	7,100	5,616	4,117
Lebore ..	20	2.30	20	16.13	21	13.45	21	13.45	British.	Ors S. S. Corp.	549.6	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,500	14,325	4,685
Salvador ..	20	16.20	20	17.44	21	10.25	21	10.25	British.	Pacific Steam Nav. Co.	215.0	33.5	13.0	Champerico, Guatemala	Cristobal, C. Z.	Coffee, general.	55	1,270	735
Son Zofio ..	20	23.45	21	6.53	21	14.35	21	16.40	British.	Anglo-Mexican Pet. Co.	400.2	52.3	22.0	Iquique, Chile.	Curacao, D. W. L.	Ballast.	6,032	3,892	
J. L.																			
Lukenbach.	20	23.35	21	7.26	21	15.55	21	15.55	American.	Lukenbach Line.	448.9	60.2	31.0	Portland, Ore.	Boston, Mass.	General.	9,000	9,204	6,861
Nevadan ..	21	5.37	21	8.13	21	18.35	21	18.35	American.	Amer.-Hawaiian Line.	460.0	57.8	26.2	Portland, Ore.	Boston, Mass.	General.	7,467	6,829	4,627
Pacific ..																			
Enterprise ..	21	6.00	21	8.42	21	19.25	21	19.25	British.	Furness Withy & Co.	435.9	60.2	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	8,159	9,641	6,989
Santa Tecla ..	20	14.30	21	10.25	21	20.00	21	20.00	American.	N. O. & S. A. S. S. Co.	298.6	40.0	21.5	Talcahuano, Chile.	New Orleans, La.	General logs.	3,252 ¹	2,832	1,803
Canadian ..																			
Plunder ..	21	16.15	21	17.09	22	11.45	22	14.55	British.	Can. Nat. Steamships.	400.0	52.4	22.0	Vancouver, B. C.	Montreal, Canada.	Lumber, general.	5,709	5,858	4,108
Colombia ..	21	10.05	22	6.09	22	13.20	22	9.05	American.	Panama Mail S. S. Co.	380.0	48.7	24.0	San Francisco, Cal.	New York, N. Y.	General.	1,706	6,015	4,281
Cubore ..	21	19.00	22	6.43	22	14.10	22	13.20	American.	Calmar S. S. Corp.	450.6	57.2	30.0	Cruz Grande, Chile	Baltimore, Md.	Blast furnace ore	11,319	7,956	4,866
Sylvan Arrow ..	21	19.50	22	7.09	22	14.50	22	14.30	American.	Standard Transp. Co.	467.6	62.7	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,264	9,698	6,862
Kuma Maru ..	22	6.10	22	7.59	22	16.45	22	19.45	Japanese.	Nippon Yusen Kaisha.	405.0	53.0	21.0	Manila, P. I.	Boston, Mass.	General.	4,800	6,962	4,967
Wido ..	21	13.30	22	12.45	22	20.40	22	20.40	American.	Roland Line.	393.4	54.3	27.0	Corral, Chile.	Hamburg, Germany	General.	7,899	6,585	4,631
Kronvis ..	21	20.25	22	6.14	22	13.45	25	10.30	American.	U. S. Army	390.0	54.2	21.0	San Francisco, Cal.	New York, N. Y.	Army supplies.	699		
Daghestan ..	22	23.00	23	6.40	23	14.49	23	18.30	British.	Shell Oil Co.	405.0	52.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	7,523	6,355	4,637
Australia ..	22	1.00	23	7.40	23	15.50	23	13.30	American.	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	16,890	12,514	8,427
Greife Star ..	23	00.30	23	8.00	23	18.05	23	18.05	British.	Blue Star Line	389.8	60.3	31.3	Seattle, Wash.	Buenos Aires, Arg.	Chilled fruit	2,608	6,014	4,492
Persophone ..	23	7.00	23	8.41	23	18.00	23	18.00	Danzig.	W. Tanksschiff Rieler	498.6	63.2	27.0	Los Angeles, Calif.	Ellesmere Pt., Eng.	Gasoline.	10,907	9,336	6,338
S-20 ..									American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Liverpool ..																			
Maru ..	23	13.45	23	14.21	23	21.30	23	22.40	Japanese.	Balfour Guthrie & Co.	385.0	51.0	28.0	Portland, Ore.	Norfolk, Va.	Wheat	7,693	5,919	4,400
San Francisco ..	23	13.50	23	15.01	23	22.35	24	10.30	German.	Hamburg-American Line	432.3	59.1	26.0	Vancouver, B. C.	Hamburg, Germany	General	7,441	8,454	6,344
Avala ..	23	17.15	23	18.30	24	1.15	24	11.15	Yugoslav.	Babarizza & Co.	425.0	58.2	26.0	Iquique, Chile.	Azores	Nitrate.	10,000	7,710	5,674
San Mateo ..	23	16.55	24	6.31	24	13.45	24	6.20	American.	United Fruit Co.	315.2	44.2	19.0	San Francisco, Cal.	Cristobal, C. Z.	Lumber, general.	402	3,496	2,141
Svan ..									American.	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.	Tug.	11,303	9,841	6,946
Levant Arrow ..	23	21.00	24	6.38	24	13.35	24	14.55	American.	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Portland, Maine	Gasoline.	576	1,182	742
Baralt ..	23	3.00	24	7.35	24	15.05	25	6.10	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	6,140	12,417	8,305
Oreana ..	24	2.30	24	9.36	24	15.05	24	22.15	British.	Pacific Steam Nav. Co.	511.6	62.0	28.3	Talcahuano, Chile.	Liverpool, England	General	8,287	7,079	5,028
League ..	24	12.45	24	13.27	24	19.40	24	19.40	American.	Amer.-Hawaiian Line.	407.7	53.7	29.0	Seattle, Wash.	Boston, Mass.	General	8,800	8,201	6,225
Eagle ..	24	12.45	24	13.27	24	20.45	24	20.45	American.	Standard Transp. Co.	410.0	56.0	28.5	Los Angeles, Calif.	New York, N. Y.	Gas oil	8,800	8,201	6,225
Arizona ..	24	14.30	24	15.16	24	22.40	25	17.20	French.	French Line.	425.0	54.8	24.0	Vancouver, B. C.	Le Havr., France.	General	6,452	7,351	5,189

** For orders.

** Motor ship.

** Submarine.

* Tanker.

Western	24	17.30	25	5.57	25	14.45	25	14.45	American	Sun Oil Co.	439.6	65.0	23.4	Los Angeles, Calif.	Chasler, Pa.	Gasoline	13,275	9,607	6,551
El Cervo	21	21.00	25	7.11	25	16.15	25	19.45	British	C. T. Bowring & Co.	407.4	52.2	25.2	La Libertad, Ecu.	Philadelphia, Pa.	Crude oil	7,752	6,046	4,326
Gen. G. W.																			
Getty	25		25	7.40	25	14.45			American	U. S. Army	98.0	22.0		Balboa, C. Z.	Cristobal, C. Z.	Nitrate	7,949	5,852	4,112
Hendon Hall	25	8.45	25	9.40	25	17.30	25	17.40	British	Inter. Freightng Corp.	399.6	53.0	27.0	Toecopilla, Chile	Carliston, S. C.				
Shikshan	25	11.00	25	12.24	25	19.55	25	21.50	Japanese	Mitsui & Co.	400.2	53.3	24.0	Vancouver, B. C.	Gaslon, England	Lumber, wheat	6,933		
Maru	25	11.30	25	12.38	25	20.45	26	1.30	German	Hamburg-American Line	337.0	40.0	21.0	Coos Bay, Ore.	Grimsby, England	Lumber	3,647		
Kyushia	25	10.30	25	13.25	25	21.15	26	2.25	American	Grace Line	485.0	64.0	24.0	Valparaiso, Chile	New York, N. Y.	General	2,675	10,687	6,633
Santa Barbara	25	2.00	25	15.00	25	21.55	26	2.04	Norwegian	Barber S. Line	461.0	69.0	24.0	Davao, P. I.	New York, N. Y.	General	5,888	9,891	6,829
Tai Ping	25	14.45	25	15.50	25	23.35	26	13.20	Italian	Nav. Libera-Tristina	436.6	55.4	25.0	Vancouver, B. C.	Truiste, Italy	Wheat, general	8,500	7,098	4,493
Rialto																			
Pacific																			
Redwood	25	17.00	25	17.51	26	12.45	26	12.45	American	Dimon S. S. Corp.	409.6	54.2	24.5	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,688	5,684	3,557

Junior mine planter.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 19.	Pastores	United Fruit Co.	Port Limon, Costa Rica.	October 19.	No. 945-M ¹⁴	Pan American Airways	Talara, via wayports.
October 20.	Ulla	United Fruit Co.	New York via Habana.	October 19.	No. 9653 ¹⁴	Pan American Airways	San Salvador and wayports.
October 20.	No. 9085 ¹⁴	Pan American Airways	San Salvador and wayports.	October 19.	Pastores	United Fruit Co.	New York via Habana.
October 20.	Darien C-35 ¹⁴	Scudis Airplane Co.	Barranquilla and wayports.	October 19.	No. 9137 ¹⁴	Pan American Airways	Miami via wayports.
October 21.	No. 945-M ¹⁴	Pan American Airways	Talara via wayports.	October 22.	No. 9670 ¹⁴	Pan American Airways	San Salvador and wayports.
October 22.	Carare	Pan American Airways	Avonmouth via wayports.	October 22.	No. 142-M ¹⁴	Pan American Airways	Miami via wayports.
October 22.	Saxola.	United Fruit Co.	New York via Kingston.	October 22.	Ulla	United Fruit Co.	Port Limon, Costa Rica.
October 22.	Tela.	United Fruit Co.	New Orleans, La.	October 22.	Carare	Ellers & Pykes Line	Avonmouth via wayports.
October 22.	Tenon 1.	Hamburg-American Line	Hamburg and wayports.	October 23.	No. 945-M ¹⁴	Pan American Airways	Talara via wayports.
October 22.	No. 9776 ¹⁴	Pan American Airways	Miami via wayports.	October 23.	Saxola.	United Fruit Co.	New York via wayports.
October 23.	Cristobal	Panama R. R. S. Line	New York via Haiti.	October 23.	Tenon 1.	Hamburg-American Line	Hamburg and wayports.
October 23.	No. 9083 ¹⁴	Pan American Airways	San Salvador and wayports.	October 23.	Tela	United Fruit Co.	Tampico and wayports.
October 23.	Daytonian	Leyland S. S. Line.	Liverpool via wayports.	October 23.	Anaehueina ¹⁵	United Fruit Co.	Bogota, Rep. of Panama.
October 23.	Boylar	Colombian S. S. Line.	Colon, Rep. of Panama.	October 23.	Amelia I. ¹⁵	A. Tagaropolis	Colon, Rep. of Panama.
October 23.	Amelia I. ¹⁵	A. Tagaropolis	Colon, Rep. of Panama.	October 23.	Amelia N. ¹⁴	A. Tagaropolis	Colon, Rep. of Panama.
October 23.	Anaehueina ¹⁵	United Fruit Co.	Colon, Rep. of Panama.	October 23.	Escipe Fuego ¹⁶	Pan American Airways	Colon, Rep. of Panama.
October 24.	Atlantida	Standard Fruit & S. S. Co.	New Orleans & Habana.	October 23.	Amelia N. ¹⁴	A. Tagaropolis	Colon, Rep. of Panama.
October 25.	Tela	United Fruit Co.	Boels, Rep. of Panama.	October 24.	No. 9685 ¹⁴	Connelly & Papi	Citacoo via wayports.
October 25.	No. 399-N ¹⁴	Pan American Airways	La Guayra via wayports.	October 24.	Bolivar	Pan American Airways	San Salvador and wayports.
October 25.	No. 9670 ¹⁴	Pan American Airways	San Salvador and wayports.	October 24.	Darien C-35 ¹⁴	Colombian S. S. Line.	New York via wayports.
October 25.	No. 9137 ¹⁴	Pan American Airways	Miami via wayports.	October 25.	Atlantida	Scudis Airplane Co.	Barranquilla and wayports.
October 25.	Pearl Marie ¹⁶	G. I. Bryan.	Colon, Rep. of Panama.	October 25.	Tela	Standard Fruit & S. S. Co.	New Orleans and wayports.
				October 25.	Pearl Marie ¹⁶	United Fruit Co.	New Orleans and wayports.
						G. I. Bryan.	Bluefields, Nicaragua.

Motor schooner.

Motor boat.

PORT OF BALBOA.

October 18.	Saramaeta	United Fruit Co.	San Francisco, Calif.	October 19.	Saramaeta	United Fruit Co.	San Francisco, Calif.
October 19.	Mojave	Standard Transportation Co.	Los Angeles, Calif.	October 22.	Mojave	Standard Transportation Co.	Los Angeles, Calif.
October 20.	Real	Los Hermanos	Panama, Rep. of Panama.	October 22.	Real	Los Hermanos	Panama, Rep. of Panama.
October 21.	Hans Elliott	Hans Elliott	Panama, Rep. of Panama.	October 22.	Hans Elliott	Hans Elliott	Panama, Rep. of Panama.
October 21.	Nueva Panama	Nueva Panama	Panama, Rep. of Panama.	October 22.	Nueva Panama	Nueva Panama	Panama, Rep. of Panama.
October 21.	La Placenta	Union Oil Co. of California.	Los Angeles, Calif.				

Launch.

Other than ships passing through the Canal.

Cargo Through the Canal During September, 1930.

On pages 190 and 191 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in September, 1930. This cargo, segregated according to direction, as compared with September, 1929, and the differences, are shown in the following tabulation:

	September, 1929.	September, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	746,289	595,589	-150,700
Pacific to Atlantic.....	1,686,494	1,463,993	-222,501
Total.....	2,432,783	2,059,582	-373,201

It will be noted from the above that the Atlantic to Pacific tonnage decreased 150,700 tons, or 20.2 per cent, as compared with September, 1929, and that from the Pacific to the Atlantic decreased 222,501 tons, or 13.2 per cent, making a total decrease of cargo tonnage in both directions of 373,201 tons, or 15.3 per cent. As in the past several months, the heavy decline in Pacific-bound tonnage has been due to a general curtailment in shipments and decreases in cargo tonnage of several important commodities as indicated under "Principal commodities." The Atlantic-bound tonnage, while showing increases in many of the ordinarily important commodities, was depressed by heavy decreases in the shipments of nitrates, ores (principally iron), and lumber, the aggregate decrease of which as compared with September, 1929, amounted to over 290,000 tons.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-seven and two-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 23.9 per cent in Europe. Tonnage from the United States decreased 97,340 tons, or 19.5 per cent, as compared with September, 1929, and that from Europe fell short by 40,911 tons, or 22.3 per cent. The proportion of the tonnage from each of these areas to the total tonnage was approximately the same in September of both years.

Destination.—Forty-five and two-tenths per cent of the Pacific-bound tonnage was destined to the United States; 14.3 per cent to South America; 23.1 per cent to Asia; and 12.9 per cent to Australasia. Cargo tonnage to all these areas declined as compared with September, 1929, in actual tonnage as follows: To the United States, 55,825 tons, or 17.2 per cent; to South America, 37,701 tons, or 30.6 per cent; to Asia, 31,251 tons, or 18.5 per cent; and to Australasia, 9,814 tons, or 11.3 per cent. In point of the percentage of the cargo to these various areas to the total Pacific-bound tonnage, slight increases were registered in that to the United States, Asia, and Australasia, while that to South America decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 63.1 per cent came from the United States; 19.1 per cent from South America; 10.4 per cent from Canada; 4.7 per cent from Australasia; and 3.7 per cent from Asia. As compared with the corresponding month a year ago, tonnage from the United States decreased slightly—9,960 tons, or a little over

1 per cent—while the percentage of the total cargo made a heavy increase. Tonnage from South America showed a heavy decrease in its relation to the total tonnage, and a loss in actual figures of 244,008 tons, or 46.6 per cent, as compared with September, 1929. The proportion of the total tonnage coming out of South America in September, 1929, was over 31 per cent. The curtailment of shipments of nitrates and iron ore was largely responsible for this decrease. Tonnage originating in Canada and Australasia made decisive increases both in actual tonnage and in their respective relations to the total cargo. That from Canada increased 70,388 tons, or 85.4 per cent, while that from Australasia increased 25,092 tons, or 58 per cent. The heavy increase in tonnage from Canada was accounted for principally by the heavier wheat movement out of that area, while the gain from Australasia was due to increased shipments of food products in cold storage and iron ore. Cargo from Asia decreased 34,329 tons, or 38.2 per cent, and also showed a sharp decrease in its relation to the total cargo. Decline in shipments of coconut oil and rice accounted for the large decrease in cargo tonnage from Asia.

Destination.—Segregated according to destination, 51.9 per cent of the cargo in this direction went to the United States, and 40.2 per cent to Europe. Tonnage to the United States decreased in its proportion to the total tonnage and showed a decrease in actual tonnage of 170,410 tons, or 18.3 per cent. That to Europe decreased 60,420 tons, or 9.3 per cent, although its relation to the total cargo in September, 1930, was slightly greater.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify almost 88 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 12 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Atlantic to Pacific-bound commodities which aggregated more than 10,000 tons for September, 1929, or September, 1930, are listed in the following tabulation, showing differences:

Commodity.	September, 1929.	September, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	15,488	3,613	-11,875
Asphalt.....	15,182	6,598	-8,584
Automobiles.....	18,466	11,089	-7,377
Cement.....	34,577	14,850	-19,727
Coal and coke.....	13,831	8,109	-5,722
Cotton.....	13,354	28,936	+15,582
Manufactured goods:			
Iron and steel.....	160,999	131,331	-29,668
Machinery.....	14,659	14,116	-543
Railroad material.....	8,748	9,927	+1,179
Tinplate.....	19,828	17,229	-2,599
Textiles and miscellaneous.....	23,122	14,076	-9,046
Metals, various.....	15,397	5,177	-10,220
Oils, mineral.....	56,485	34,912	-21,573
Paper.....	21,085	16,231	-4,854
Phosphates.....	18,127	39,537	+21,410
Sugar.....	1,454	14,320	+12,866
Sulphur.....	10,762	13,163	+2,401
Tobacco.....	12,883	6,937	-5,951

The above 18 commodity groups for September, 1930, comprise 66 per cent of the cargo moving from the Atlantic to the Pacific. Thirteen of the items decreased in tonnage as compared with September,

1929, while 5 showed increases. The heaviest decline was in manufactures of iron and steel while phosphates registered the largest increase.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 97 per cent of all cargo moving from the Pacific to the Atlantic during the month of September, 1930. Commodities which aggregated more than 10,000 tons either during the past month on the corresponding month in 1929 are listed below:

Commodity.	September, 1929.	September, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	37,560	29,628	-7,932
Beans.....	20,352	8,394	-11,958
Canned goods (fish, fruit, vegetables, etc.).....	94,987	104,427	+9,440
Cold storage (food products).....	17,053	20,767	+3,714
Copra.....	10,955	8,761	-2,194
Cotton.....	8,145	10,149	+2,004
Flour.....	7,764	10,361	+2,597
Fruit, dried.....	14,207	16,949	+2,742
Lumber.....	278,641	231,141	-47,500
Metals (principally copper).....	50,835	55,417	+4,582
Nitrates.....	216,115	63,164	-152,951
Oils, mineral.....	430,222	462,213	+31,991
Ores (principally iron).....	159,850	68,542	-91,308
Paper.....	5,226	10,869	+5,643
Rice.....	18,185	3,124	-15,061
Paper pulp.....	7,127	12,827	+5,700
Sugar.....	70,536	81,752	+11,416
Wheat.....	85,656	117,500	+31,844

* Fresh fruit not included.

The above 18 commodity groups comprise 89 per cent of the cargo moving from the Pacific to the Atlantic during September, 1930. Eleven of the items showed increases and 7 decreases. Of the latter shipments, nitrates declined 152,951 tons and ores (principally iron) 91,308 tons, the loss in these 2 commodities alone far offsetting the gains in the 11 that showed increases. Mineral oils and wheat registered the heaviest increases with gains of 31,991 tons and 31,844 tons, respectively, over the corresponding month in 1929.

(Continued on page 190.)

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 28, 1930.

No. 784.

Nicaragua, east coast, Cape Gracias a Dios light. The following message was received by the Hydrographic Office from the U. S. S. *Denver* through the Balboa radio station:

October 27, 1930, the light on Cape Gracias a Dios, Nicaragua, was observed to be showing the following characteristics: Flashing white; flash 0.5 second, eclipse 3.0 seconds. Visible 15 miles.
Approximate position: Latitude 15° 00' 13" N., longitude 83° 09' 11" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., October 28, 1930.

No. 786.

Nicaragua, west coast, Corinto Harbor, buoys changed. The commanding officer of the U. S. S. *Rochester* reports the following changes of buoys in Corinto Harbor, Nicaragua, under date of October 22, 1930:

1. No. 1 spar buoy is missing and will not be replaced.
2. No. 3 spar buoy was replaced this date in 30 feet of water in approximately latitude 12° 28' 08" N., longitude 87° 12' 34" W., on the following bearings: Front entrance beacon 84°, front entrance beacon Dona Paula range 135½°, Morro Cardon 170°

H. BURGESS,
Governor.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reassign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reassigning beyond the Isthmus, cargo billed Cristobal for Orders may be reassigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, September, 1930.—Continued from page 188.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.			ASIA.					Grand total.	Per cent of total cargo.					
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. 2	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. 1	Total, South America.	Australia.	New Zealand.	Australasia. 1	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. 1	Total, Asia.		
NORTH AMERICA:																									
UNITED STATES—																									
North Atlantic ports.....	182,264	389,126			73,485	188,847	11,912	956,1,633	4,139	4,487	23,127	7,155	3,755			70,10,980	11,376	19,881	29,004	6,348	65,609	289,563	48.6		
South Atlantic ports.....	2,843					2,843	173	60	18	5	2,358	2,614						4,646	2,700	800	8,146	13,603	2.3		
Gulf ports.....	39,284	615			18	39,917		60	182	278	119	639	7,300				7,300	495	10,754	31,902	6,398	49,549	97,405	16.3	
Total, United States.....	224,391	1,004	1,266		91,4,855	231,607	12,085	1,076	1,833	4,422	6,964	26,380	14,455			70,18,280	11,871	35,281	63,606	13,546	124,304	400,571	67.2		
East coast of Canada.....	2,674					2,674							5,251			4,630	3,099					10,403	1.7		
East coast of Central America.....	246					246																5,497	0.9		
Cristobal, C. Z. 2.....	2,012	93,576				5,597	936	950	703	398	743	3,730										9,827	1.6		
West Indies.....	233	18				258	6			10	5	21						13,059				13,059	2.3		
Total, North America.....	226,882	3,705	4,842		98,4,855	240,382	13,027	2,026	2,536	4,830	7,712	30,131	19,706			8,385	3,169	31,260	11,871	48,340	63,606	13,546	137,363	439,136	73.7
ENRORO:																									
British Isles.....	4,677	4,578	231			9,486	10,451				301	2,193	5,765	18,710									66,297	11.1	
Belgium.....	8,170	1,681				9,851	8,840	65	742	643	169	10,459											20,310	3.4	
Denmark.....	311	119				430	360					360											790	0.1	
France.....	1,289	395	7			1,691	789	10	145		170	1,114											2,805	0.5	
Germany.....	8,430	336	1,439	92		10,297	723	180	207	589	1,005	2,704											13,001	2.2	
Holland.....	2,513	252				3,317	1,301	22	204	788	22	2,337											5,654	1.0	
Italy.....	853	1,328	532			2,713	66		16	905	987												3,700	0.6	
Norway and Sweden.....	6,026					6,026	958	850	2,216	360		4,384											10,410	1.8	
Spain and Portugal.....	95					95	30				113	143											238	0.0	
Europe 1.....	4,730	650				5,380	1,500				12,375	13,875											19,255	3.2	
Total, Europe.....	37,094	9,339	2,209	644		49,236	25,018	1,117	3,680	4,734	20,524	55,073				38,101							142,460	23.9	
East coast of South America.....	5,171	578	59			5,808					249	249					47	190	237				6,531	1.1	
Africa.....																							7,462	1.3	
Grand total.....	269,147	13,622	7,110		742,4,855	295,476	38,045	1,143	6,216	9,564	28,236	85,453	19,706	32,948	3,169	76,823	11,918	48,530	63,843	13,546	137,887	595,589	100.0		
Per cent of total cargo:																									
September, 1930.....	45.2	2.3	1.2	0.1	0.8	49.6	6.4	0.5	1.0	1.6	4.6	14.3	3.3	9.1	0.5	12.9	2.0	8.1	10.7	2.3	23.1	100.0	.....	
September, 1929.....	43.6	2.0	2.8	0.1	0.7	49.2	9.4	0.7	0.3	2.0	4.1	16.5	4.8	6.8	.....	11.6	2.3	5.9	9.7	4.8	22.7	100.0	.....	
September, 1928.....	44.9	2.3	2.0	0.3	0.9	50.4	4.8	1.1	0.6	1.8	4.0	12.3	5.7	7.9	3.0	16.6	1.8	3.8	12.0	3.1	20.7	100.0	.....	

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, September, 1930.

(Figures represent tons of 2,240 pounds.)

From —	North America.										Europe.										Grand total.	Per cent of total cargo.				
	United States.					Foreign.					Europe.															
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.			East coast of South America.	Egypt.	Africa.	
NORTH AMERICA:																										
West coast U. S.	522	2564	476	10,465	573,197				7,021	35,481	615,649	195,352	11,859	1,263	8,463	22,053	3,954	5,139	260	50,570	298,913	8,800		923,362	63.	
West coast of Canada ..	17,891			17,891	12,638	121			1,403	32,113	53,789	160	20	2,430	4,084	203	11,574		24,831	97,138	3,204			132,455	9.0	
West coast of Cen. Am. ..	366			366			579	131	1,076						106					106				1,182	0.1	
Bahama, C. Z.				253	253		65																	315	0.0	
Hawaiian Islands	3,283			331	3,671				3,671																3,671	0.3
Total, N. America.	543,793	4,476	17,105	5,375	12,638	121	7,655	35,965	652,824	249,141	12,019	1,283	10,809	26,249	4,154	16,713	263		75,451	396,157	12,004			1,060,985	72.5	
SOUTH AMERICA:																										
Chile	58,793		4,031	63,724			371	110	64,295	22,252	10,667		5,592	4,693	2,570	356	593		33,500	80,217		8,270			152,692	10.4
Colombia	955		63	1,013			1,612	25	2,655											115	962	31			2,655	0.2
Ecuador	9,015		4	9,019			2,690	5	11,714	68	20	9	342	208	184	16				1,263	53,109				12,707	0.9
Peru	12,533	2,930	2,523	17,933	23,003	303	76	64	46,426	30,983	4,346		1,035	12,828	177		2,500		7,311	8,113					49,585	6.7
W. coast, South Amer.	2,228			2,228			1,025	144	3,372	763				39											11,485	0.9
Total, S. America.	83,499	2,930	7,515	93,947	23,003	303	5,774	348	128,372	54,046	15,033	9	6,969	17,765	2,747	540	3,016		42,276	142,401	31	8,270			279,074	19.1
AUSTRALASIA:																										
Australia	13,700			13,703	2,595				16,205	3,830											3,830				20,035	1.4
New Zealand	1,543			1,543	138		88		1,819	28,135	4			1,000						29,139					30,584	2.1
Australasia.										14,690			2,645								17,335				17,335	1.2
Total, Australasia.	15,243			15,243	2,693		88		18,024	46,655	4		2,645	1,000						50,304					63,328	4.7
ASIA:																										
Philippine Islands	24,548		17,833	42,491					42,491																42,491	2.8
China	5,357		591	5,948			863		6,811																6,811	0.5
Japan	3,422			3,422			127	13	3,549																3,562	0.2
Far East	2,832			2,832					2,832																2,832	0.2
Total, Asia.	36,159		18,444	54,603			930	13	55,606																55,606	3.7
Grand total.	678,694	7,406	73,068	759,168	43,391	424	14,517	37,326	854,826	349,842	27,056	1,289	20,504	45,014	6,991	17,253	3,276		117,727	588,862	12,035	8,270		1,463,993	100.0	
Per cent of total cargo:																										
September, 1931	46.4	0.5	5.0	51.9	3.0		1.0	2.5	58.4	23.9	1.8	0.1	1.4	3.1	0.5	1.2	0.2		8.0	40.2	0.9	0.5		100.0		
September, 1929	50.1	0.7	4.4	55.2	3.2	0.1	0.7	1.4	60.6	19.2	0.8	0.1	1.5	2.9	0.2	0.2	0.5		11.6	38.5	0.3	0.6		100.0		
September, 1928	48.5	1.5	3.0	53.0	4.6	0.2	1.5	1.5	60.8	17.7	0.5	0.1	1.6	2.0	1.2	1.2	0.4		10.6	37.0	0.6	1.1	0.5	100.0		

* General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective October 27, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$9.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, yellow.....	Lb.	.15
Oakum, Navy, spun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.23
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Mod. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.



Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
The Panama Canal Record, Balboa Heights, Canal Zone, or
The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., November 5, 1930. No. 14.

Canal Traffic During October.

During the month of October, 1930, 517 commercial vessels and 7 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,288,982.08, and on the launches \$28.50, or a total tolls collection of \$2,289,010.58.

The daily average of commercial vessels was 16.68, and the average tolls collection was \$73,838.13, as compared with an average of 15.26 transits and \$68,570.12 in tolls in the previous month. The average amount of tolls paid by each of the commercial transits was \$4,427.43, as compared with \$4,407.62 for the month of September, 1930.

Commercial traffic for October was the second highest in the current calendar year, with respect to both the number of transits and amount of tolls collected, having been exceeded only by the traffic passing through the Canal in January (531 transits and \$2,360,211.24 in tolls). The increase in traffic in October was due to the additional tonnage placed in service to take care of the seasonal increase in shipments, particularly food products. As compared with the traffic passing through in October, 1929, that for October, 1930, shows approximately an 8 per cent decrease.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 10 months of calendar years 1929 and 1928:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
Total, first 10 months of calendar year, 1930.....	4,911	21,855,083.75	16.15	71,891.72
Total, first 10 months of calendar year, 1929.....	5,383	23,038,789.02	17.71	75,785.49
Total, first 10 months of calendar year, 1928.....	5,228	21,705,995.54	17.14	71,170.47

As compared with the first 10 months of the calendar year 1929, the corresponding period this year has had 472 fewer transits and \$1,183,705.27 less tolls.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, November 1, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Lesmar	25	18 10	26	6 05	26	14 28	26	18 09	American	Calmar S. S. Corp.	409.8	54.2	23.0	Baltimore, Md	Seattle, Wash.	General.	6,613	6,581	6,559
Belmore	25	22 15	26	6 05	26	16 00	26	17 15	American	Ore S. S. Corp.	550.3	72.2	25.0	Baltimore, Md	Cruz Grande, Chile	Ballast.	15,476	4,354	4,354
Georgian	25	20 35	26	7 45	26	16 20	26	17 25	American	Amer-Hawaiian Line	434.3	57.7	18.0	Boston, Mass	Portland, Oreg.	General.	3,430	7,983	5,912
Good Hope	26	7 05	26	7 45	26	17 13	26	18 25	British	Canadian Transp. Co.	400.0	52.0	24.0	Galveston, Texas	Vancouver, B. C.	Sulphur, salt.	7,219	5,821	4,264
Glasgow Maru	25	4 30	26	8 25	26	18 10	26	19 28	Japanese	Kokusa Kisen Kaisha.	385.0	51.0	25.11	Boston, Mass	Nagoya, Japan	(⁷)	3,312	6,213	4,685
San Francisco	26	13 35	26	14 10	26	20 43	26	23 15	American	Isthmian S. S. Lines	405.0	52.0	26.0	Baltimore, Md	San Antonio, Chile.	Steel, general.	5,292	6,290	4,432
Wyo.	26	10 40	26	10 40	26	12 22	26	12 22	American	V. W. Wirt.	48.0	11.6		Cristobal, C. Z.	Gatun, C. Z.	Ballast.	27		5
Rolling Stone	26	10 40	26	10 40	26	12 22	26	12 22	Panamaian	Robert Wilcox				Cristobal, C. Z.	Gatun, C. Z.	Ballast.	27		29
Gen. G. W. G.	26	16 10	26	9 20	26	16 15	26	13 00	British	U. S. Army	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	6,265	4,571	4,571
Hakody	27	4 25	27	6 15	27	14 24	27	17 00	British	Empire Shipping Co.	441.0	60.0	21.6	New York, N. Y.	Manila, P. I.	General.	3,092	9,240	6,152
Japanese	27	1 15	27	8 35	27	15 36	27	16 40	British	Furness, Withy & Co.	405.0	53.5	16.5	New York, N. Y.	Fremantle, Aust'la	General.	1,350	6,051	4,657
Lamar Law	27	9 25	27	12 25	27	19 30	27	20 45	American	Nelson Line	390.0	53.0	17.1	New York, N. Y.	San Francisco, Cal.	General.	2,520	5,653	4,122
Sacramento	27	4 00	27	12 25	27	19 30	27	20 45	German	Hamburg-American Line	438.0	55.4	18.6	Hamburg, Germany	Valparaiso, Chile	General.	1,643	7,334	5,221
Willmott	27	15 55	27	16 10	27	22 35	27	23 22	American	Dimon S. S. Corp.	390.0	54.0	21.0	Philadelphia, Pa.	Seattle, Wash.	General.	3,219	6,162	4,433
Havana Maru	27	19 10	27	20 00	27	23 42	28	1 15	Japanese	Osaka Steamship Co.	407.3	50.10	20.6	New York, N. Y.	Shanghai, China.	General.	3,727	6,538	4,769
Wintona	27	19 10	27	20 00	27	23 42	28	1 15	British	Avenue Shipping Co.	375.0	50.6	17.6	New York, N. Y.	Fremantle, Aust'la	Gen., case oil.	3,912	6,295	4,663
Spandburg	27	19 30	27	20 35	27	23 28	28	1 29	British	Swail Oil Co.	440.0	59.5	20.0	Newcastle, Eng.	Los Angeles, Calif	Ballast.	1,828	7,915	4,797
Redgrave	27	16 30	28	6 05	28	13 40	29	1 25	Dutch.	Royal Neth. S. S. Co.	400.6	58.6	21.2	Hamburg, Germany	Corral, Chile.	General.	1,507	2,826	1,770
S. H. S.	26	19 30	28	6 20	28	14 46	28	16 00	British	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	3,250	10,002	6,743
Almagro	27	13 45	28	7 10	28	14 52	28	16 00	American	Pacific Steam Nav. Co.	303.4	43.0	17.7	New York, N. Y.	Tocopilla, Chile	General.	8,143	7,611	5,450
Schwaben	28	3 25	28	7 10	28	16 00	28	16 55	German	North German Lloyd	491.0	63.8	20.8	Hamburg, Germany	Vancouver, B. C.	General.	9,222	7,472	5,542
Chiriqui	28	3 25	28	7 25	28	16 50	29	20 20	Danzig	Standard Oil Co.	470.0	63.2	20.6	Rotterdam, Holland	Talara, Peru	Ballast.	2,985	9,258	6,944
Tue-tai	28	6 20	28	8 25	28	17 41	28	21 50	British	N. Z. Shipping Co.	460.5	62.0	29.6	Liverpool, England	Auckland, N. Z.	General.	7,312	6,018	7,306
Steel Exporter	28	9 10	28	9 15	28	17 56	29	21 50	American	Isthmian S. S. Lines	424.2	56.2	25.6	Philadelphia, Pa.	Sourabaya, Java.	Steel, general	8,143	7,611	5,450
Robin Gray	28	10 20	28	10 25	28	18 51	29	1 25	American	Isthmian S. S. Lines	424.2	56.2	25.6	Baltimore, Md	Seattle, Wash.	Steel, general	9,222	7,472	5,542
Cassara	28	13 40	28	14 00	28	20 55	29	7 35	British	Furness-Prince Line.	450.0	58.0	15.0	Baltimore, Md	Vancouver, B. C.	Ballast.	2,985	9,258	6,944
Mexican	28	13 50	28	14 50	28	22 25	29	23 30	American	Amer-Hawaiian Line.	472.3	57.2	18.10	Boston, Mass	Tacoma, Wash.	General	4,887	5,193	3,528
Pulido	28	14 10	29	6 09	29	14 27	29	15 35	Chilean	Cia. Sud. Amer. de Vap.	350.0	51.0	16.3	Greenock, England	San Antonio, Chile	(⁸)	2,983	9,027	6,539
Lukenbach	29	1 35	29	7 05	29	14 55	29	15 55	American	Lukenbach Line	471.0	59.2	20.2	Boston, Mass	Los Angeles, Calif	General	2,357	6,521	4,947
San Felipe	29	6 00	29	12 55	29	18 48	29	19 50	American	States S. Co.	409.0	54.0	16.8	Philadelphia, Pa.	San Diego, Calif.	General	2,501	10,626	6,680
Dixie Arrow	29	11 20	29	12 30	29	20 12	29	21 34	American	Standard Oil Co.	468.0	62.7	19.8	Philadelphia, Pa.	Valparaiso, Chile	Ballast.	6,823	4,797	4,797
Santa Maria	29	10 35	29	14 15	29	21 00	30	1 25	American	Grace Line.	466.0	64.0	24.6	New York, N. Y.	Vancouver, B. C.	General	2,501	10,626	6,680
Mabroun	29	13 20	29	17 35	29	21 30	30	1 20	British	R. Chapman & Son	412.0	55.2	16.0	Edin., Italy	Vancouver, B. C.	Ballast.	6,823	4,797	4,797

⁷ Tanker.

⁸ Motor ship.

⁹ Yacht.

⁵ Submarine.

⁶ Launch.

⁷ Phosphates, wheat, and cotton.

⁸ Ammunition and general.

Astral	29	18 50	29	20 30	30	11 30	30	12 40	American	Ore S. S. Corp.	439.5	58.0	22.0	New York, N. Y.	Los Angeles, Calif.	8,913	6,216
Ketchikan	29	12 45	30	6 00	30	15 00	30	16 00	American	Ore S. S. Corp.	550.3	72.2	24.0	New York, N. Y.	Cruz Grande, Chile	15,551	4,297
Longlake	29	14 30	30	7 00	30	12 57	31	10 20	British	G. Iverson Lumbering	74.0	17.0	8.0	St. Pierre, Fr. Col'y	Eusebio, Mexico.	20	85
S. S. 17			30	10 30	20	16 31			American	U. S. Navy	251.0	21.0		Cristobal, C. Z.	Balboa, C. Z.		
Henry D. Whiton.			30	10 30	30	16 31			American	U. S. Navy	251.0	21.0		Cristobal, C. Z.	Balboa, C. Z.		
Fuelitas	30	12 15	30	12 30	30	19 04	30	20 30	American	Texas Gulf Sulphur Co.	356.0	51.6	24.0	Galveston, Texas	Everett, Wash.	4,695	5,367
Delidit	30	11 15	30	13 35	30	20 30	21	23 35	Italian	Union S. S. Co.	450.6	55.5	18.0	Newcastle, Eng.	Vancouver, B. C.	8,182	6,090
St. Lawrence	31	5 20	31	6 40	31	14 05	31	1 35	American	Panama-Pacific Line	586.4	80.3	26.0	New York, N. Y.	San Francisco, Cal.	3,091	25,254
Bronxville	31	6 45	31	7 00	31	14 05	31	1 35	Norwegian.	A. F. Klaveness & Co.	336.3	54.2	14.0	Boston, Mass.	Victoria, B. C.	5,058	6,715
President																	
Pok.	31	7 10	31	7 35	31	15 24	21	21 20	American	Dollar Line	502.4	62.5	28.0	New York, N. Y.	San Francisco, Cal.	3,717	12,660
Eda	31	8 05	31	8 45	31	16 50	31	18 15	Italian	Can-Amier. S. S. Co.	418.0	53.9	16.0	Genoa, Italy	Seattle, Wash.	6,200	4,421
Colombo	30	7 40	30	10 55	31	18 18	31	19 15	Italian	Can. Gen. Italiana	518.0	64.0	27.0	Genoa, Italy	Valparaiso, Chile	1,358	12,553
Chateau																	
Thierry	31	3 00	31	14 30	31	21 02			American	U. S. Army	437.0	58.2	24.0	New York, N. Y.	Balboa, C. Z.	939	
Fernbank	31	16 15	31	20 00	1	9 24	1	11 00	Norwegian.	Fern Line	382.0	53.0	21.9	Corpus Christi	Shanghai, China.	4,033	6,112
Ghost			31						American	C. W. Wirtz				Cristobal, C. Z.	Balboa, C. Z.		
Rotcruia	1	1 30	1	6 25	1	13 33	1	20 05	British	N. S. Shipping Co.	526.0	61.4	23.6	London, England	Havkes Bay, N. Z.	3,800	12,846
Sadovar	21	22 25	1	6 04	1	14 29	1	15 45	British	Pacific Steam Nav. Co.	215.0	33.5	14.1	Cristobal, C. Z.	Chapman, Gust.	610	1,270
Guayquil	30	15 10	1	6 10	1	14 32	1	15 45	American	Panama R. S. S. Line	251.0	43.6	17.0	New York, N. Y.	Guayquil, Ecuador	330	2,874
Birtfeld	31	6 35	1	6 25	1	15 01	1	16 20	German	Hamburg-American Line	477.0	62.9	19.0	Hamburg, Germany	Guayquil, Ecuador	265	9,665
Delidit	31	7 45	1	7 10	1	15 47	1	16 45	Dutch	Holland-American Line	400.0	64.8	21.6	Rotterdam, Holland	Vancouver, B. C.	1,959	11,724
Vanollito	1	6 40	1	7 10	1	16 43	1	17 45	British	Imperial Oil Co.	510.0	68.2	24.0	London, England	Talara, Peru	1,573	7,711
San Salvador	1	6 45	1	8 05	1	16 43	1	17 45	British	Anglo-Mexican Pet. Co.	407.0	52.0	21.0	Manchester, Eng.	Talara, Peru	1,573	7,711
Call	26	18 20	1	10 05	1	18 45	1	19 35	German	Roland Line	216.5	33.9	14.0	Cristobal, C. Z.	Los Angeles, Calif.	210	1,105
Cauca	14	10 1	1	9 55	1	17 37	1	19 00	Colombian.	National Navigation Co.	107.0	22.0	10.0	Cristobal, C. Z.	Guayquil, Ecuador	188	258
Pomoylan.	1	10 13	1	10 35	1	19 02	2	4 40	American	United Fruit Co.	407.7	53.7	17.0	Boston, Mass.	Buenaventura, Col.	188	258
Surinac	31	18 13	1	12 00	1	18 49	1	20 30	American	Amer-Hawaiian Line	337.0	41.0	17.1	Cristobal, C. Z.	Portland, Ore.	2,569	7,107
Rolling Stone	1	14 50	1	19 50	2	9 16			Panamanian	Robert Wilcox	418.0	16.6		Cristobal, C. Z.	San Francisco, Cal.	3,667	2,323
Uniois	31	13 20	1	19 25	2	9 16			American	The Texas Co.	418.0	56.0	18.3	Pt. Arthur, Tex	Pearl Island, R. P.	27	20

[illegible]

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Draft.			Nature.	Tons.	Gross.	Net.
Fergan 14	26	14 15	26	14 55	26	22 30	27	1 50	Norwegian.	385.3	54 8	25 0	New York, N. Y.	Iron ore	7,312	6,615	4,859
Oreida	26	10 21	26	15 40	27	22 35	27	3 15	American.	251.0	43 6	20 4	Chesler, Pa.	Gen.	2,825	2,656	1,621
Texas 15	24	6 14	27	6 24	27	22 35	27	13 45	American.	565.0	106 0	30 0	New York, N. Y.	Nitrate of soda.	5,350	3,924	2,668
Denmark	27	2 00	27	7 06	27	16 00	27	16 00	British.	376.0	53 8	25 0	Azores 17	Rice	7,300	6,264	4,681
Ferhane 14	27	11 30	27	12 18	27	20 35	28	9 15	Norwegian.	360.3	51 7	23 0	Cienfuegos, Cuba.	General	3,301	5,957	4,325
Santa Elisa	27	12 45	27	13 45	27	20 35	28	2 45	American.	251.0	43 6	22 1	New York, N. Y.	General	3,015	2,823	1,740
Santa Isabel	14	16 20	27	14 26	27	22 30	27	22 30	American.	438.8	55 6	25 1	New York, N. Y.	General	8,340	7,004	5,017
Iauri	27	14 35	27	15 21	27	22 30	27	22 30	American.	561.0	80 0	33 5	Hamburg, Germany	Iron ore	21,650	15,560	4,496
Amerikaland 14	27	10 15	28	6 11	28	13 35	28	13 35	Swedish.	586.0	72 3	33 5	Baltimore, Md.	Gen., passengers.	7,372	25,262	18,194
Pennsylvania 14	27	10 15	28	6 11	28	13 35	28	13 35	American.	586.0	80 0	33 5	New York, N. Y.	Gen., passengers.	7,372	25,262	18,194
S. C. T. Dood 14	28	1 30	28	6 37	28	14 45	28	14 45	American.	425.6	57 2	28 0	Boston, Mass.	Gasoline	8,000	7,481	4,975
Panquaco 16	28	7 06	28	15 35	28	15 35	28	15 35	Panamanian.	125.6	23 5	13 0	Cristobal, C. Z.	General	119	1,273	706
Acapulco	27	21 40	28	7 14	28	15 35	30	10 00	British.	215.7	33 6	13 0	Cristobal, C. Z.	General	3,854	12,977	9,373
Orazo 14	28	4 30	28	7 50	28	16 20	28	1 30	Italian.	509.9	61 8	26 0	Genoa, Italy	General	6,203	7,145	5,474
Carl Legien	27	21 00	28	8 15	28	17 35	28	1 30	German.	409.8	53 9	21 0	Hamburg, Germany	Gen., raw sugar	3,222	3,294	2,356
Barnbet	27	21 30	28	9 08	28	19 00	28	23 15	German.	322.2	45 3	19 0	Bilbao, Spain	Chickpeas	5,400	5,349	2,950
Herman Frasch	28	7 00	28	9 30	28	18 45	28	18 45	American.	356.0	51 6	27 0	Poughkeepsie, N. Y.	Lumber	7,133	6,572	4,788
Eleanor	27	22 16	28	10 01	28	19 15	28	19 15	American.	410.5	54 3	24 4	Baltimore, Md.	Lumber	5,510	5,434	4,011
Christenson.	28	6 00	28	10 31	28	20 40	29	00 05	British.	387.0	52 0	23 0	Montreal, Canada.	Lumber	6,931	8,552	6,236
Golden Sea	28	6 00	28	10 31	28	20 40	29	00 05	British.	387.0	52 0	23 0	Montreal, Canada.	Lumber	6,931	8,552	6,236
K. I.	28	6 37	28	10 55	28	21 35	28	21 25	American.	446.0	56 1	29 0	Boston, Mass.	General	8,125	11,060	8,076
Lockenbach.	28	12 45	28	13 30	28	20 30	28	22 50	Danish.	414.7	52 7	27 0	Copenhagen, Den.	General	6,814	7,717	5,763
Amerka 14	28	13 00	28	14 08	28	22 55	28	22 50	American.	414.5	53 7	28 0	Baltimore, Md.	General	5,350	3,924	2,658
Wilboro.	28	13 45	28	14 25	28	22 55	28	22 55	American.	350.0	49 0	27 0	Boston, Mass.	Nitrate of soda.	2,762	7,764	4,941
Kentuckian	28	17 20	28	18 18	28	23 35	29	15 00	British.	422.8	56 2	29 0	Azores 17	General	15,500	11,556	7,075
Chunpark	28	20 30	29	6 14	29	13 35	29	13 35	Chilean.	510.9	68 2	31 0	New York, N. Y.	Crude oil	902		
Aconagua	27	3 00	29	6 14	29	13 35	29	13 35	Chilean.	510.9	68 2	31 0	Hallfax, N. S.	Crude oil	902		
Canadotte 14	27	3 00	29	6 14	29	13 35	29	13 35	Chilean.	510.9	68 2	31 0	Hallfax, N. S.	Crude oil	902		
Chamont	28	20 35	29	7 40	29	15 20	29	18 00	British.	483.0	64 7	26 0	Hampden Bds., Va.	General, frozen.	6,226	11,706	8,320
Tarumaki 14	28	20 35	29	7 40	29	15 20	29	18 00	British.	483.0	64 7	26 0	London, England	General	510	1,105	698
Call.	29	4 30	29	8 01	29	18 30	30	00 05	German.	216.5	32 9	12 4	Cristobal, C. Z.	General	1,111	6,228	4,491
Transporter.	29	6 45	29	8 52	29	20 05	1	10 05	British.	400.1	52 4	15 0	Hallifax, N. S.	General	7,394	6,864	5,260
Heranger 14	29	10 40	29	10 51	29	20 30	29	19 30	Norwegian.	398.1	54 6	28 0	Rottterdam, Holland	Lumber, general.	7,642	7,330	5,239
Emley City.	29	12 40	29	13 26	29	22 30	30	1 00	American.	395.5	55 0	23 0	Liverpool, England	Crude oil	6,118	4,851	3,826
El Lobo 1	29	12 55	29	13 26	29	22 30	30	1 50	British.	385.2	51 0	23 0	Philadelphia, Pa.	Crude oil	6,118	4,851	3,826
Heron 1	29	18 30	29	19 55	30	10 45	30	10 45	Norwegian.	400.3	52 2	20 0	Curacao, D. W. I.	Ballast	6,700	5,743	3,988
Pacgonk.	29	18 30	29	19 55	30	10 45	30	10 45	Norwegian.	400.3	52 2	20 0	Antwerp, Belgium	General	8,250	7,098	4,995
Specybank 14	29	22 30	30	6 33	30	13 30	30	15 00	British.	420.0	53 9	26 0	Azores 17	Nitrate of soda.			

14 Sugar and canned goods.

15 Automobile machinery and lumber.

16 Revenue cutter.

17 For orders.

18 Battleship.

19 Motor ship.

20 Tanker.

Ship	Date	Vessel	Line	Arrivals	Departures	For
Point Montara	29	19 20	30	6 41	30 14	10 American
Lady Adair	29	20 45	30	7 10	30 15	30 American
Roby Lewis	29	21 50	30	8 15	30 16	30 British
Delfjick	30	00 15	30	8 54	30 18	00 Dutch
Julia	29	23 59	30	9 16	30 16	55 American
Luckenbach	30	1 30	30	10 13	30 18	05 American
Onondaga	30	12 05	30	10 30	30 20	30 American
Peter Kerr	30	14 50	30	10 30	30 20	30 British
Vulcan City	30	15 30	30	10 30	30 20	30 American
Susan V.	30	19 30	30	10 30	30 20	30 American
Luckenbach	30	20 30	31	6 12	31 14	05 American
Myriam	31	2 20	31	6 48	31 14	25 French
Boren	31	2 20	31	6 48	31 14	25 Swedish
Alaska	31	2 30	31	7 26	31 15	30 French
Hegra	31	5 20	31	7 56	31 15	30 American
Californian	31	9 30	31	10 11	31 17	20 American
Sariname	31	9 55	31	10 42	31 18	15 American
Kirkston	31	10 30	31	10 49	31 18	10 British
Langanger	31	6 30	31	11 05	31 19	15 Norwegian
Wickbia	31	17 15	31	13 34	31 20	35 American
Oak Branch	31	13 40	31	14 21	31 21	45 British
Sidway	31	17 20	31	6 48	31 13	50 Norwegian
Dilworth	31	14 15	31	7 02	31 15	10 American
Boskoop	31	21 45	31	7 25	31 15	50 Dutch
Nelson	31	2 40	31	8 28	31 16	30 American
Traveler	31	3 30	31	9 06	31 16	45 British
Gid	31	6 00	31	9 53	31 17	40 British
Cragness	31	21 45	31	10 17	31 18	25 American
San Rafael	31	11 14	31	13 45	31 22	00 American
West Cape	31	12 35	31	13 52	31 22	15 French
Wilmington	31	14 00	31	14 34	31 23	20 Swedish
Balboa	31	14 45	31	15 39	31 22	15 British
Beepark	31	26	7 13	26	7 13	26 American
Maria	31	26	7 13	26	7 13	26 American

1 Tanker.

20 Launch.

21 Lumber, paper, and pulp.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

Date	Vessel	Line	Front	Date	Vessel	Line	For
October 26	Ulva	United Fruit Co.	Port Limon, Costa Rica.	October 26	No. 303-N	Pan American-Grace Airways.	Talara via waypoints.
October 26	No. 945-M	Pan American-Grace Airways	Talara via waypoints.	October 26	No. 9685	United Fruit Co.	Salvador and waypoints.
October 26	Escher Thorden	Aluminum Line	Houston via waypoints.	October 26	Ulua	Pan American Airways	New York via Habana.
October 27	Van Rensselaer	Royal Netherlands S. S. Co.	Hamburg via waypoints.	October 28	Daytonian	Leyland S. S. Line	Port Limon, Costa Rica.
October 27	Calamander	United Fruit Co.	New York via Habana.	October 28	Escher Thorden	Aluminum Line	Paranaribo and waypoints.
October 27	Carthage	Scandinavian Line	Barnaquilla and waypoints.	October 28	Orinoco	Hamburg-American Line	Port Limon, Costa Rica.
October 27	No. 9088	Pan American Airways	Salvador and waypoints.	October 28	Cristobal	Panama R. R. S. S. Line	New York via Haiti.

* Other than ships passing through the Canal.

* DEPARTURES.

Date	Vessel	Line	Front	Date	Vessel	Line	For
October 26	No. 303-N	Pan American-Grace Airways.	Talara via waypoints.	October 26	No. 303-N	Pan American-Grace Airways.	Talara via waypoints.
October 26	No. 9685	United Fruit Co.	Salvador and waypoints.	October 26	Ulua	Pan American Airways	New York via Habana.
October 26	Daytonian	Leyland S. S. Line	Port Limon, Costa Rica.	October 28	Escher Thorden	Aluminum Line	Paranaribo and waypoints.
October 28	Orinoco	Hamburg-American Line	Port Limon, Costa Rica.	October 28	Cristobal	Panama R. R. S. S. Line	New York via Haiti.

* Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 28.	Orinoco	Hamburg-American Line	Hamburg via waypoints.	October 28.	Van Rensselaer	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
October 28.	No. 300-N ²³	Pan American-Grace Airways	Talara via waypoints.	October 29.	Calamares	United Fruit Co.	Port Limon, Costa Rica.
October 28.	Zacapa	United Fruit Co.	New York via Kingston.	October 29.	No. 9688 ²¹	Pan American Airways	Salvador and waypoints.
October 28.	Iriona	Spanish S. S. Line	New Orleans, La.	October 29.	No. 9137 ²¹	Pan American Airways	Miami via waypoints.
October 28.	Buenos Aires	Swissair	Barcelona and waypoints.	October 30.	No. 399-N ²³	Pan American Airways	Curacao via waypoints.
October 29.	No. 9688 ²¹	C. D. Mallory & Co.	Curacao, D. W. I.	October 30.	Zacapa	United Fruit Co.	New York via waypoints.
October 29.	No. 142-M ²³	Pan American Airways	San Salvador and waypoints.	October 30.	Iriona	United Fruit Co.	Port Limon, Costa Rica.
October 29.	Clenden	United Fruit Co.	Miami via waypoints.	October 31.	Buenos Aires	Spanish Line	Barcelona via waypoints.
October 30.	Van Rensselaer	French Line	Curacao, D. W. I.	October 31.	Swissair	C. D. Mallory & Co.	Curacao, D. W. I.
October 30.	Amapala	Royal Netherlands S. S. Co.	Havre via waypoints.	October 31.	No. 9670 ²¹	Pan American Airways	San Salvador and waypoints.
October 31.	Dungannon	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.	October 31.	Corlova C-40 ²¹	Seadco Airplane Co.	Baranquilla and waypoints.
October 31.	Anachucina ²⁴	The Texas Co.	New Orleans and Habana.	October 31.	Inapaguina	United Fruit Co.	Colon, Rep. of Panama.
October 31.	Orinoco	United S. S. Line	Port Arthur, Tex.	November 1	Camden	A. Tagaropoulos	Colon, Rep. of Panama.
October 31.	Amadeta I. ²⁴	United Fruit Co.	Port Limon, Costa Rica.	November 1	Daytonian	United Fruit Co.	Curacao, D. W. I.
October 31.	Anachucina ²⁴	United Fruit Co.	Colon, Rep. of Panama.	November 1	Iriona	United Fruit Co.	Santa Marta, Colombia.
November 1.	Orinoco	A. Tagaropoulos	Colon, Rep. of Panama.	November 1	Amapala	Standard Fruit & S. S. Co.	New Orleans and waypoints.
November 1.	Iriona	Hamburg-American Line	Colon, Rep. of Panama.	November 1	Van Rensselaer	Royal Netherlands S. S. Co.	Amsterdam and waypoints.
November 1.	No. 300-N ²³	United Fruit Co.	Port Limon, Costa Rica.				
November 1.	No. 9127 ²³	Pan American Airways	La Guayra via waypoints.				
November 1.	No. 945-M ²³	Pan American Airways	Miami via waypoints.				
November 1.	No. 9688 ²³	Pan American-Grace Airways	Talara via waypoints.				
November 1.	No. 300-N ²³	Pan American-Grace Airways	San Salvador and waypoints.				
November 1.			Talara via waypoints.				

²³ Air mail carrier. ²⁴ Motor boat.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
October 19.	Sapelo ¹	U. S. Navy.	Los Angeles, Calif.	October 26.	La Placencia ¹	Union Oil Co.	Los Angeles, Calif.
October 31.	Nueva Panama ²⁵	Hans Elliot.	Panama Bay, R. P.	November 1	Sapelo ¹	U. S. Navy.	Los Angeles, Calif.
October 31.	Real ²⁶	Hans Elliot.	Panama Bay, R. P.	November 1	Nueva Panama ²⁵	Hans Elliot.	Panama Bay, R. P.
October 31.	Roma ²⁶	A. Valdez.	Panama Bay, R. P.	November 1	Real ²⁶	Hans Elliot.	Panama Bay, R. P.
October 31.	El Libertador ²⁶	A. Valdez.	Panama Bay, R. P.	October 31.	Des Hermanos ²⁶	A. Valdez.	Panama Bay, R. P.
November 1.	Maipo ¹	Chilean Government.	Atica, Chile.	October 31.	Roma ²⁶	A. Valdez.	Panama Bay, R. P.
				October 31.	El Libertador ²⁶	A. Valdez.	Panama Bay, R. P.

¹ Tanker. ²⁵ Motor ship. ²⁶ Motor schooner.

* Other than ships passing through the Canal.

Census of the Canal Zone.

The Act of Congress providing for the fifteenth and subsequent decennial censuses directed that a census of the Panama Canal Zone be taken by the Governor of the Canal Zone, in accordance with plans prescribed or approved by the Director of the Census. This was done, as of April 1, 1930. The total population was 39,469. The enumeration included members of the Army and Navy forces and all other people living in the Canal Zone but did not include Americans or any others whose usual place of abode was within the Republic of Panama. The personnel of the Army and Navy, exclusive of civilian residents attached to them, was: Army, 8,686; Navy, 1,194; total, 9,880. The civil population was 29,589.

Of the total population, 22,199 were in the Balboa Division and 17,270 in the Cristobal Division. The areas of these divisions are those of the court divisions or magisterial districts.

The boundaries of each town or village and military or naval reservation were defined precisely, and the remaining areas, sparsely inhabited, were defined and designated as rural areas. The enumeration areas in the Balboa Division were numbered 1 to 24, inclusive, and those in the Cristobal Division were 25 to 47, inclusive.

The census sheets were forwarded to the Bureau of the Census with the report of the enumeration but prior to their forwarding the Bureau of Statistics of the Canal recorded the major data on tabulating cards, for the preparation of statistics to be used primarily for school and health work. The tables presented herewith were compiled from the cards.

The population of the 47 enumeration areas by color (white, black, and all others, the latter principally Indian, mestizo, Chinese) and sex was as follows:

Area number.	Name of Area.	White.		Black.		All other.		Total population.
		Male.	Female.	Male.	Female.	Male.	Female.	
1	Ancon.....	706	745	104	62	7	5	1,629
2	Balboa Heights.....	171	164	8	14			357
3	Quarry Heights.....	286	115	2	18			421
4	Balboa.....	1,658.	1,341	114	79	6	1	3,199
5	La Boca.....	36	18	1,645	1,506	20	3	3,228
6	Palo Seco.....	2	1	80	31	1		115
7	Balboa Naval reservation.....	34	13					47
8	Fort Amador.....	1,256	138		3	26		1,423
9	Corozal.....	1,436	178	18	13			1,645
10	Corozal Hospital for Insane.....	79	82	319	216	13	3	712
11	Fort Clayton.....	1,648	114	3	26			1,791
12	Miraflores.....	14	2	20	10			46
13	Red Tank.....	12	3	1,243	1,019	20	10	2,307
14	Pedro Miguel.....	412	361	22	26			821
15	Rural, East Side.....	8	3	322	244	141	110	828
16	Paraiso.....	37	4	692	597	6	2	1,338
17	Summit.....	4		28	20	21	9	82
18	Gamboa Prison.....	37	6	42		7		101
19	South Gamboa.....	1		91	88	11	11	202
20	Rural, East Side.....	84	4	220	64	208	23	603
21	Alhajuela Area.....	34		93	7	170	33	337
22	Las Cascadas.....	8	8	124	130	3		273
23	Rural, West Side.....	1		103	84			188
24	Rural, West Side.....	8	2	271	21	2	2	506
25	North Gamboa.....	14	8	8	11	6	3	50
26	Rural, East Side.....	3		162	82	95	62	404
27	Darien.....	25	10	13	10			58
28	Frijoles.....	1	1	70	52	3		127
29	Rural, East Side.....	3	2	197	149	2	1	354
30	Monte Lirio.....	3		13	9			35
31	Rural, East Side.....	3		57	39	1	1	101
32	Rural, West Side.....	2	2	59	50			113
33	Rural, West Side.....	13	6	337	212	2		570
34	Rural, West Side.....	10	2	373	139			524
35	Fort Sherman.....	649	90	14	12	1		766
36	Gatun.....	284	269	941	829	14	1	2,338
37	Fort Davis.....	2,321	225	29	58	17	3	2,653

Area number.	Name of Area.	White.		Black.		All other.		Total population.
		Male.	Female.	Male.	Female.	Male.	Female.	
38	Colon Radio Station.....	11	3					14
39	Rural, East Side.....	8	3	183	91	6		291
40	Mount Hope.....	10	7		2	7	2	28
41	Silver City.....	1		2,335	2,123	1		4,460
42	Camp Bied.....	28	2	430	264	59		783
43	Cristobal.....	450	163	17	11	3		644
44	France Field.....	801	108	1	32			942
45	Coco Solo.....	1,077	78	10	3	28		1,196
46	Fort Randolph.....	599	48	4	19			670
47	Fort De Lesseps.....	134	23				2	159
	Total.....	14,431	4,352	10,817	8,675	907	287	39,469

Ages.—The following is a segregation by ages, color, and sex:

Age in years.	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
0-3.....	294	276	726	736	55	37	1,075	1,049
4.....	92	67	207	205	16	7	315	279
5.....	86	78	242	232	12	10	340	320
6.....	97	75	249	240	13	3	359	318
7.....	95	99	253	257	21	7	369	363
8.....	100	103	277	261	7	12	384	376
9.....	100	103	282	290	4	8	386	401
10.....	90	85	316	282	6	5	412	372
11.....	75	77	263	255	5	8	343	340
12.....	94	85	276	279	7	3	377	367
13.....	76	70	274	255	4	3	354	328
14.....	66	57	240	248	3	4	309	309
15.....	77	71	212	264	7	4	296	339
16.....	76	67	224	236	10	4	310	307
17.....	66	60	200	229	13	5	279	294
18.....	383	70	182	170	12	4	577	244
19.....	624	58	195	173	14	1	833	232
20.....	693	58	146	137	41	8	880	203
21.....	947	52	116	86	28	3	1,091	141
22-34.....	6,851	1,146	1,271	1,380	354	74	8,476	2,600
35-44.....	1,988	909	2,382	1,408	172	47	4,542	2,364
45 and over.....	1,461	686	2,264	1,051	103	30	3,828	1,767
Unknown.....			20	1			20	1
Total.....	14,431	4,352	10,817	8,675	907	287	26,155	13,314

School attendance.—Those who had attended school at any time since September 1, 1929, were as follows: White, 2,004; black, 4,842; all others, 60; total, 6,896.

Literacy (ability to read and write in any language) and *ability to speak English* among those who were 10 years of age or over are summarized as follows:

Race.	Persons 10 years of age or over.	Literate.	Percentage of literacy.	Able to speak English.	Percentage.
White.....	17,118	16,979	99.19	16,832	98.33
Black.....	15,035	12,607	83.85	12,182	81.02
All others.....	982	511	52.04	254	25.87
Total.....	33,135	30,097	90.83	29,268	88.33

Families.—Using the term “family” as defined in the census rules, the numbers of persons who are heads of families are as follows, segregated by age groups and races:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Below 21.....	2	1	10	2	1		13	3
21-34 inclusive.....	539	13	370		42	3	951	16
35-44 inclusive.....	826	19	1,419	33	48		2,293	52
45 and over.....	836	16	1,245	26	32	1	2,113	43
Total.....	2,203	49	3,044	61	123	4	5,370	114

The size of families is shown in the following table, the family consisting of the head and those living with him:

Number in family.	Number of families.			
	White.	Black.	All others.	Total.
1	11	3		14
2	740	577	30	1,347
3	559	514	21	1,094
4	448	436	25	909
5	251	380	19	650
6	133	369	13	515
7	65	297	10	372
8	35	240	4	279
9	6	153	5	164
10	4	85		89
11		29		29
12		10		10
13		8		8
14		2		2
15		2		2
Total	2,252	3,105	127	5,484

Place of birth of Canal Zone residents is shown as follows:

	Canal Zone.	U. S. and possessions other than C. Z.	West Indies.	Panama.	Colombia.	All other places.
White	1,111	15,271	118	580	76	1,627
Black	5,017	85	8,043	5,454	586	307
All others	110	46	43	724	101	170
Total	6,238	15,402	8,204	6,758	763	2,104

The year of immigration to the Canal Zone (or United States), when shown, is as follows. This implies to people whose birthplace was neither the Canal Zone nor the United States:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Before 1914	720	248	4,098	2,268	89	19	4,907	2,535
1914 to 1928	618	339	3,365	3,382	374	162	4,357	3,883
1929 and 1930	115	52	682	490	373	55	1,170	597
Total	1,453	639	8,145	6,140	836	236	10,434	7,015

Occupations.—Residents employed in a gainful occupation are segregated by occupation, as follows:

Occupation.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
Army commissioned personnel	365					
Army noncommissioned personnel	42					
Army other enlisted personnel	8,253		19		7	
Navy commissioned personnel	80					
Navy noncommissioned personnel	9					
Navy other enlisted personnel	1,066				29	
Accounting group	61	4	10			
Artisans	2		4		7	
Blacksmith group	12		33			
Boilermaker group	81		23		3	
Building trades group	17		10			
Carpenter and woodworking group	81		65		3	
Electrical employees	177		307		13	
Machinists group	301		49		3	
Painters	17		102			
Plumbing and steamfitting group	34		111			
Sheetmetal worker group	12	1	56			
Miscellaneous metal trades	57		10			
Attendants, hospital	1		9			
Barber group	12	6	37	4		
Cash accounting employees	18	14	1		1	
Courts employees	7		3			
Engineering group, professional	63					

Occupation.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
Engineering group, subprofessional	39	1	29			
Operators of office devices	3	20				
Stenographic and typist group	12	69	14	3		
General clerical employees	390	113	167	12	4	1
Operator group, coaling plant	18		1			
Coal handlers			34			
Community workers	30	2	10	2		
Crane and steamshovel group	16		16			
Customs employees group	13		1			
Domestic servant group	18	28	41	655	5	16
Educational group	25	74	58	25		1
Enginemen and firemen, stationary	88		100	1	2	
Farming group	34	2	1,350	30	176	5
Licensed employees on floating equipment	148		32		1	
Unlicensed employees on floating equipment	105	1	491	1	24	
Hotel and hospital service	13		124	9	20	3
Foremen, not included with employees supervised	158	2	72		14	
Helpers, mechanical trades	21		398	1	19	
Janitor group	3	1	135	3	3	
Laborer group	87		1,060	8	338	
Messenger group	1		70	1	1	
Miscellaneous semiskilled labor	30	5	205	13	18	
Laundry worker group	36		31	14		
Library group	1	6				
Lock employees group	72		99		1	
Medical group, professional	75					
Medical group, subprofessional	49	115	9	4		
Motor and animal transportation group	50		97	1	4	
Police and fire protection group	174		118		6	
Postal employees group	34	3	5	1		
Power plant and pumping plant employees	35	1	39		4	
Panama Railroad employees, miscellaneous	79	1	64		3	
Printing trades employees	1		16	1		
Property accounting group	13		1			
Storekeeper group	16	1	54		2	
Commissary group	65	41	187	13	12	1
Cargo handling employees	9		189		1	
Telephone employees	11	8	10	3		
Supervisory and administrative employees	9					
Steamship agent group	15	3	1		3	

Industries.—The distribution of persons employed among the various industries and organizations operating on the Canal Zone, is tabulated as follows:

Industry or organization.	White.		Black.		All others.	
	Male.	Female.	Male.	Female.	Male.	Female.
United States Army	8,723	24	67	9	34	
United States Navy	1,184	5	22		30	
Accounting Department	117	63	5	1	2	
Cattle industry	7		106		8	
Coaling plants	16		153			
Commissary Division	99	43	317	29	3	
Constructing Quartermaster	70	1	249			
Courts	9	1	2			
Dredging Division	201	2	494	1	62	
Electrical Division	120	8	98	1	29	
Executive Department	328	101	197	10		1
Fortifications Division	21	2	24			
Health Department	122	133	178	32	4	
Lock Operation	244	3	435		4	
Madden Dam Project	113		91		60	
Marine Division	139	2	240	1	1	1
Mechanical Division	464	9	291	1	3	
Municipal Division	66	2	247		14	
Operation and Maintenance, general			148			
Gatun Dam and backfills	5		56			
Office Engineer section	14		6			
Section of Surveys	46	1	25		7	
Panama Railroad	104	4	226	5	181	
Receiving & Forwarding Agency	41		437		65	
Supply Department	166	15	450	4	5	
Panama Canal and Panama R. R. unspecified	3		1			
Steamship agencies and allied interests	122	9	15		4	
Welfare organizations	22	4	7	1	1	
Group catering to personal needs	3		20	10		2
Private family employment	20	37	101	618	8	16
Miscellaneous business	151	53	1,436	82	196	7
Unspecified	24		33		5	

Unemployment among residents is shown as follows:

	White.		Black.		All others.		Total.	
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
Number of persons who usually work at a gainful occupation.....	12,763	523	6,118	789	724	27	19,605	1,339
Number of above out of a job.....	29	3	31	1	3	1	63	5

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 4, 1930.

No. 790.

Caribbean Sea, Serrana Bank, Southwest Cay, light reexhibited. A radiogram from the U. S. lighthouse tender *Acacia* reports the following:

Serrana Bank light, Caribbean Sea, relighted November 1, 1930. Approximate position: Lat. 14° 16' 40" N., long. 80° 23' 50" W.

NOTE.—This light reported extinguished in Notice to Mariners No. 772, Balboa Heights, October 6, 1930, and No. 789, November 1, 1930.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 4, 1930.

No. 791.

Panama, west coast, Morro Puercos, light established. An unwatched flashing white light was established November 2, 1930, on the southeasternmost point of Morro Puercos, R. P.

Position: Latitude 7° 14' 27" N., longitude 80° 25' 00" W. *Characteristics:* Flashing white; period 5.0 seconds, flash 0.5 second, eclipse 4.5 seconds; 12 flashes per minute. Visibility, 20 miles.

Description: Pyramidal lattice work steel tower 50 feet high, painted white on two sides. Height of focal plane 275 feet above mean high water.

H. BURGESS,
Governor.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective October 27, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending October 25, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Pastores.....	United Fruit Co.....	October 19....	October 19....	7	301
Escapa Fuego.....	Sturgeon Brothers.....	October 19....	October 22....	2	(²)
Cerigo.....	Hamburg-American Line.....	October 19....	October 25....	765	144
Caldas.....	National Navigation Co.....	October 19....	October 25....	190	145
Panama.....	United Fruit Co.....	October 20....	October 20....	112	(²)
Guatemala.....	Panama Mail S. S. Co.....	October 20....	October 21....	258	508
Haarlem.....	Royal Netherlands S. S. Co.....	October 20....	October 21....	5	25
Minden.....	North German Lloyd.....	October 20....	October 21....	77	232
Parana.....	Pacific Steam Navigation Co.....	October 20....	October 22....	386	12
Ulua.....	United Fruit Co.....	October 20....	October 22....	549	24
City of Panama.....	Panama Mail S. S. Co.....	October 20....	October 25....	434	1,340
Salvador.....	Pacific Steam Navigation Co.....	October 21....	October 21....	55	.....
Konigsberg.....	North German Lloyd.....	October 21....	October 21....	291	14
Santa Teresa.....	Grace Line.....	October 21....	October 21....	88	42
San Vicente.....	Pacific-Atlantic Line.....	October 21....	October 22....	126	4
Pacific Grove.....	Furness, Withy & Co.....	October 21....	October 24....	(¹)	620
Carare.....	United Fruit Co.....	October 22....	October 22....	4	(²)
Kuma Maru.....	Nippon Yusen Kaisha.....	October 22....	October 22....	114	(²)
Sixaola.....	United Fruit Co.....	October 22....	October 23....	333	262
Colombia.....	Panama Mail S. S. Co.....	October 22....	October 23....	217	341
Illinois.....	French Line.....	October 22....	October 23....	101	35
Teutonia.....	Hamburg-American Line.....	October 22....	October 23....	86	8
Wido.....	North German Lloyd.....	October 22....	October 23....	373	104
Tela.....	United Fruit Co.....	October 22....	October 23....	1,154	65
Orduna.....	Pacific Steam Navigation Co.....	October 22....	October 23....	173	211
Cristobal.....	Panama R. R. S. S. Line.....	October 23....	October 23....	2,450	.....
Daytonia.....	Leyland S. S. Line.....	October 23....	October 23....	410	.....
Wisconsin.....	French Line.....	October 23....	October 23....	36	79
San Francisco.....	Isthmian S. S. Lines.....	October 23....	October 24....	51	75
Bolivar.....	United Fruit Co.....	October 23....	October 24....	6	244
Nosa Chief.....	N. O. & S. A. S. S. Co.....	October 23....	October 24....	361	152
Teno.....	Chilean S. S. Line.....	October 23....	October 24....	(¹)	6
Baralt.....	Royal Netherlands S. S. Co.....	October 24....	October 24....	574	66
Montevideo Maru.....	Osaka Shosen Kaisha.....	October 24....	October 24....	25	1
Orcoma.....	Pacific Steam Navigation Co.....	October 24....	October 24....	5	2
San Mateo.....	United Fruit Co.....	October 24....	October 25....	691	(²)
Arizona.....	French Line.....	October 24....	October 25....	98	99
Atlantida.....	Standard Fruit & S. S. Co.....	October 24....	October 25....	125	371
Pearl Marie.....	Penillebois.....	October 24....	October 25....	(¹)	30
Rialto.....	Nav. Libera-Triestina.....	October 25....	October 25....	(¹)	.....
Tela.....	United Fruit Co.....	October 25....	October 25....	74	260
Tai Ping.....	Barber Line.....	October 25....	October 25....	150	9
Santa Barbara.....	Grace Line.....	October 25....	October 25....	2	210

* No cargo discharged.

* No cargo laded.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1930 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Ancon.....	October 28....	November 2..	November 5..	November 9..	November 12.	November 17.
Cristobal.....	November 11.	November 16.	November 19.	November 23.	November 26.	December 1.
Ancon.....	November 25.	November 30.	December 3..	December 7..	December 10..	December 15.
Cristobal.....	December 9..	December 14..	December 17..	December 21..	December 24..	December 29.
Ancon.....	December 23..	December 28..	December 31..	January 4....	January 7....	January 12.

Steamers sail at 4 p. m. from pier 65, North River, Foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

THE PANAMA CANAL RECORD

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Comparison of Canal Traffic in October, 1930, with October Traffic in Previous Years.

The commercial traffic through the Panama Canal during the month of October, 1930, showed approximately a 12 per cent increase over the previous month, but was appreciably less than in October in the three preceding years, 1927, 1928, and 1929, with respect to transits and cargo.

In comparison with the traffic in October, 1929, the 517 transits in October, 1930, are fewer by 47, or 8.3 per cent, than the 564 transits in October of last year, while the net tonnage (Panama Canal measurement), aggregating 2,584,160, was less by 165,789 tons, or 6 per cent, than the total of 2,749,949 tons in October, 1929. The cargo tonnage of 2,394,410 for October, 1930, shows a decline of 451,233 tons, or 15.9 per cent, from the total of 2,845,643 tons passing through the Canal in October, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of October each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of October.			Fiscal year.	Average per month for fiscal year.		
	Commercial transits.	Panama Canal net tonnage.	Tons of cargo.		Commercial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	* 83	322,074	425,095	1915.....	* 102	361,197	465,567
1915.....	(*)			1916.....	63	199,687	257,843
1916.....	155	482,532	616,848	1917.....	150	483,213	588,213
1917.....	171	522,712	601,392	1918.....	172	547,839	627,669
1918.....	190	552,725	657,597	1919.....	169	510,416	576,385
1919.....	196	670,100	705,881	1920.....	206	712,170	781,208
1920.....	238	935,579	991,066	1921.....	241	951,323	966,601
1921.....	255	1,069,554	985,775	1922.....	228	951,455	907,075
1922.....	294	1,310,392	1,445,863	1923.....	331	1,550,482	1,630,656
1923.....	427	2,139,475	2,127,567	1924.....	436	2,179,073	2,249,559
1924.....	393	1,923,950	2,017,980	1925.....	389	1,904,596	1,996,570
1925.....	410	1,955,485	2,009,171	1926.....	433	2,064,549	2,169,787
1926.....	445	2,124,519	2,374,711	1927.....	456	2,185,651	2,312,351
1927.....	567	2,585,752	2,717,646	1928.....	538	2,454,886	2,469,226
1928.....	557	2,515,380	2,582,477	1929.....	534	2,468,483	2,555,250
1929.....	564	2,749,949	2,845,643	1930.....	515	2,498,385	2,502,519
1930.....	517	2,584,160	2,394,410	(*).....	491	2,441,576	2,341,786

* Canal opened August 15, 1914.

* Average for 10½ months of fiscal year ended June 30, 1915.

* Canal closed on account of slides.

* Average first 10 months calendar year 1930.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 8, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Diego	1	18 35	2	6 10	2	13 35	2	14 35	American	Redwood Line	331.0	52.2	25.2	Houston, Texas	Seattle, Wash	Sulphur, general.	5,428	4,131
Sidney M. Hauptman.	2	3 30	2	7 30	2	14 28	2	15 25	American	Munson, McCorkle Line	401.0	53.2	19.6	Baltimore, Md	Tacoma, Wash	Steel, general	4,345	5,167
Chas. H. Cramp	2	11 35	2	11 45	2	18 15	2	19 25	American	Arzonant S. S. Co	404.0	53.0	28.0	Baltimore, Md	Vancouver, B. C.	Steel, general	6,819	4,750
Borcas	1	17 30	2	12 45	3	23 56	3	23 56	Norwegian	Newland-Can. S.S. Co.	245.0	38.0	16.3	St. Pierre, Fr. Coly	Shanghai, China	Whisky	6,550	1,557
Mallard	3	00 45	3	6 15	3	13 01	3	14 15	American	U. S. Navy	180.0	35.6	20.0	Gatun Lake, C. Z.	Bahama, C. Z.	Ballast	7,773	5,634
Pat Doherty	3	00 45	3	6 15	3	13 01	3	14 15	American	Richfield Oil Co	430.0	59.0	19.0	New York, N. Y.	Los Angeles, Calif	General	2,280	3,984
Marsodak	3	4 25	3	6 25	3	13 48	3	15 10	American	Nelson Line	324.0	46.2	20.0	Baltimore, Md	Seattle, Wash	General	5,938	8,278
Swan	3	6 35	3	6 35	3	15 00	3	16 05	American	U. S. Navy	180.0	35.6	22.7	Cristobal, C. Z.	Bahama, C. Z.	Towing barge	15,425	4,421
Triumph	3	5 45	3	7 25	3	14 10	4	3 30	American	Roosevelt S. S. Co, S.B.	455.0	56.0	22.7	Davao, P. I.	Bahama, C. Z.	General	1,897	7,553
Svealand	3	6 05	3	7 50	3	16 08	3	21 20	Swedish	Ore S. S. Corp	561.0	72.2	23.6	Spartans Pt., Md.	Cruz Grande, Chile	Ballast	5,673	5,673
S-12	3	6 05	3	7 50	3	16 08	3	21 20	American	U. S. Navy	231.0	21.0	21.0	Cristobal, C. Z.	Bahama, C. Z.	Ballast	5,673	5,673
S-13	3	8 25	3	8 25	3	16 08	3	16 08	American	U. S. Navy	231.0	21.0	21.0	Cristobal, C. Z.	Bahama, C. Z.	Ballast	5,673	5,673
George Washington	3	10 33	3	11 20	3	17 30	3	18 40	Norwegian	Fred Olsen & Co.	425.5	55.3	16.4	Antwerp, Belgium	Vancouver, B. C.	Iron, general	3,425	5,403
Creole	1	1 00	3	13 50	3	20 43	3	20 43	Venezuelan	Creole Petroleum Co.	325.0	55.0	10.0	Characo, D. W. I.	Bahama, C. Z.	Ballast	3,425	5,403
St. Michel	3	1 35	4	6 00	4	13 18	4	14 07	American	U. S. Army	436.0	58.0	24.3	Brooklyn, N. Y.	San Francisco, Cal.	General	3,776	5,303
Siam	4	6 05	4	7 15	4	14 22	4	21 05	Danish	East Asiatic Co	410.0	55.0	18.0	Copenhagen, Den.	Vancouver, B. C.	General	1,428	6,255
Santa Rita	3	15 28	4	9 05	4	15 20	4	23 12	American	Grace Line	370.0	53.2	21.6	New York, N. Y.	Tacabano, Chile	General	1,723	5,710
El Salvador	3	5 00	4	9 00	4	15 13	5	17 15	American	Panama Mail S. S. Co.	360.0	32.0	21.7	New York, N. Y.	San Francisco, Cal.	General	9,841	6,946
Empire	4	9 00	4	9 55	4	16 36	4	21 05	American	Standard Oil Co	468.3	63.0	21.0	Portland, Me.	Los Angeles, Calif	Ballast	4,906	3,565
Arrow	4	11 22	4	11 35	4	18 11	4	19 10	British	Royal Mail S. P. Co.	375.0	48.0	17.0	Newport, England	San Francisco, Cal.	General	3,425	5,403
Pardo	4	11 22	4	11 35	4	18 11	4	19 10	British	Royal Mail S. P. Co.	375.0	48.0	17.0	Newport, England	San Francisco, Cal.	General	3,425	5,403
Cherry	4	10 10	4	12 00	4	19 18	4	20 45	British	F. & W. Risdon	400.5	51.9	20.0	Liverpool, England	Corral, Chile	General	6,172	8,568
Branch	4	11 58	4	13 25	4	20 25	4	21 30	American	Lockenbach Line	425.0	57.3	26.0	Houston, Tex	Tacoma, Wash	General	1,893	6,755
Edgar F. Lockenbach.	3	22 45	4	14 30	4	21 50	4	23 12	American	Quaker Line	410.0	54.0	18.0	Wilmington, Del.	Seattle, Wash	General	5,400	7,623
San Marcos	4	12 00	4	14 40	4	22 32	4	23 45	British	Bank Line, Ltd.	426.7	57.4	23.0	New Orleans, La.	Shanghai, China	Cotton, oil	7,340	5,433
Tweedbank	3	12 10	4	15 40	4	23 28	5	10 46	British	Blue Star Line	420.0	54.0	17.6	Newcastle, Eng.	Vancouver, B. C.	Ballast	2,428	6,545
Saxson	3	21 55	4	17 35	5	9 31	5	10 38	German	Hamburg-American Line	399.0	54.0	21.7	Hamburg, Germany	Valparaiso, Chile	General	2,428	6,545
Kellerwald	3	21 55	4	17 35	5	9 31	5	10 38	German	Hamburg-American Line	399.0	54.0	21.7	Hamburg, Germany	Valparaiso, Chile	General	2,428	6,545
Tillie	3	21 55	4	17 35	5	9 31	5	10 38	German	Hamburg-American Line	399.0	54.0	21.7	Hamburg, Germany	Valparaiso, Chile	General	2,428	6,545
No. 20, C. Z.	3	21 55	4	17 35	5	9 31	5	10 38	American	American Banana Corp.	399.0	54.0	21.7	Cristobal, C. Z.	Gatun, C. Z.	(*)	2	2
No. 4120	4	23 05	4	6 25	5	12 47	5	13 50	American	American Banana Corp.	404.6	53.0	18.6	Cristobal, C. Z.	Gatun, C. Z.	Ballast	2,197	6,760
Columbian	5	11 05	5	13 40	5	20 20	5	21 25	British	Amer-Hawian Line	419.0	55.0	18.0	Boston, Mass	Seattle, Wash	General	2,197	6,760
Corrientes	5	11 05	5	13 40	5	20 20	5	21 25	British	Donaldson S. A. Line	419.0	55.0	18.0	Glasgow, Scotland	Vancouver, B. C.	Ballast	2,197	6,760

* Tanker.

* Mine sweeper.

* Motor ship.

* Submarine.

* For dry-docking.

* Transport.

* Launch.

* Barge.

* Towing barge No. 20.

Gregalia.....	4	7 15	5 14.10	5 21.10	5 22.20	British.....	Donaldson Brothers.....	425.0	56.0	18.2	Glasgow, Scotland.	Vancouver, B. C.....	General, bananas	1,354	7,827	5,442
Gen. Wm. M. Graham 10.....						American.....	U. S. Army.....	156.0	32.0		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
K. R. Kingsbury 1.....	5	19 55	6 6.20	6 13.50	6 15.15	American.....	Standard Oil Co.....	440.0	58.2	22.0	New York, N. Y.....	Los Angeles, Calif.....	Ballast.....		9,033	5,938
Marore.....	5	22 10	6 6.15	6 14.52	6 16.45	American.....	Ore S. S. Corp.....	550.3	72.2	22.3	New York, N. Y.....	Cruz Grande, Chile.....	Ballast.....		15,551	4,297
Horace.....	5	19 30	6 7.25	6 15.45	6 16.45	American.....	Luckenbach Line.....	445.0	58.0	18.0	Boston, Mass.....	Seattle, Wash.....	General.....	3,159	8,699	6,363
Tismaren 1.....	6	2 40	6 7.40	6 16.01	6 17.00	Swedish.....	Transatlantic S. S. Co.....	435.0	56.0	21.0	Ornskoldsvik, Swed.....	Addate, Australia.....	General.....	4,873	7,001	5,346
Smol 1 1.....	6	5 55	6 8.50	6 16.42	6 17.45	American.....	Sun Oil Co.....	481.0	66.0	20.9	Chester, Pa.....	Los Angeles, Calif.....	Ballast.....		9,619	6,456
Margaret.....	6	7 20	6 10.00	6 17 37	6 22 50	Swedish.....	Johnson Line.....	407.0	53.0	24.0	Gothenburgh, Swed.....	Honolulu, T. H.....	Fertilizer, gen.....	6,565	7,048	5,337
Tai Shan 1 1.....	6	9 30	6 10.20	6 18.00	6 19.10	Panamanian.....	Barber S. S. Line.....	461.9	60.4	20.0	New York, N. Y.....	Hilo, P. I.....	General.....	4,039	9,870	6,967
John.....																
Williams V 2.....	6	6 35	6 11.45	6 19.27	7 16.12	British.....	London Miss y Society.....	117.6	26.0	7.6	London, England.....	Suva, Fiji Islands.....	General.....	22	245	86
Oropesa.....	6	9 05	6 13.30	6 20.18	7 2.25	British.....	Pacific Steam Nav. Co.....	530.0	66.0	21.3	Liverpool, England.....	Valparaiso, Chile.....	General.....	2,999	14,827	10,630
General Smuts.....	6	16 16	6 16.35	7 9 03	7 13.12	British.....	Reardon, Smith Line.....	390.0	52.6	17.0	Cardiff, England.....	Vancouver, B. C.....	Ballast.....	5,466	3,841	3,841
Durazzo.....	3	17 40	6 20.25			German.....	Hamburg-American Line.....	225.0	32.0	14.6	Cristobal, C. Z.....	Gatun, C. Z.....	Ballast.....	1,633	1,633	1,041
Pacific.....	5	7 35	7 6.05	7 12 49	7 14.00	British.....	Furness, Withy & Co.....	435.0	60.0	19.0	Glasgow, Scotland.....	Vancouver, B. C.....	General, bananas	839	9,644	6,967
Tollen 1.....	6	8 50	7 6.00	7 13 45	7 14 40	Chilean.....	Cia. Sud Amer de Vap.....	421.0	56.0	16.8	Chester, Pa.....	Valparaiso, Chile.....	General.....	1,800	7,384	5,954
Willkeno.....	6	20 10	7 7 25	7 14 50	7 16 00	American.....	Williams S. S. Line.....	415.0	55.5	15.9	Norfolk, Va.....	Seattle, Wash.....	General.....	2,174	7,750	5,805
Spencer.....	7	00 30	7 7 35	7 15 45	7 16 48	American.....	Kellogg S. S. Co.....	382.0	51.3	20.0	New Orleans, La.....	Los Angeles, Calif.....	Ballast.....		5,691	3,913
S-20 1 1.....	7	7 45	7 7 45	7 16 35	7 17 50	American.....	U. S. Navy.....	219.0	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
S-1 1 1.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	U. S. Navy.....	219.0	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
S-18 1 1.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	U. S. Navy.....	219.0	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
S-19 1 1.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	U. S. Navy.....	219.0	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
S-21 1 1.....	7	8 10	7 8.10	7 16 44	7 17 50	American.....	U. S. Navy.....	219.0	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
Iukisan Maru.....	7	00 35	7 9 05	7 17 50	7 18 35	Japanese.....	Mitsui & Co.....	385.0	51.0	25.8	Houston, Tex.....	Yokohama, Japan.....	Cotton, phospho.....	7,060	6,242	4,449
West Malwah.....	7	3 40	7 9 40	7 18 37	7 20 00	American.....	McCormick S. S. Co.....	410.5	54.0	22.0	Santos, Brazil.....	Vancouver, B. C.....	General.....	5,640	6,588	5,049
Nordpol 1.....	7	10 30	7 10 40	7 19 10	7 22 59	Danish.....	De Pont de Nemours.....	549.6	73.2	17.0	New York, N. Y.....	Talcahuano, Chile.....	General.....	3,000	6,252	4,558
Lebore.....	7	4 40	7 12 25	7 21 05	7 23 20	American.....	Ore S. S. Corp.....	389.0	52.2	24.0	Baltimore, Md.....	Cruz Grande, Chile.....	Ballast.....	14,325	4,635	
Ganden 1.....	31	18 10	7 13 30	7 22 30	7 23 10	American.....	U. S. Navy.....	403.0	43.0	25.2	Hampton Rds, Va.....	Los Angeles, Calif.....	Ballast.....			
Korantun 1.....	7	13 20	7 14 35	7 22 30	7 23 44	British.....	R. Chapman & Son.....	430.0	55.0	17.0	Liverpool, England.....	Vancouver, B. C.....	Ballast.....			
Chewinik 1 1.....	7	7 50	7 7 50	7 15 05	7 16 30	American.....	U. S. Navy.....	180.0	35.6		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
Santa.....																
Veronica.....	7	21 45	8 13 15	8 13 15	8 14 15	American.....	Isthmian S. S. Lines.....	251.0	43.6	20.6	Baltimore, Md.....	Kahului, T. H.....	(*) General.....	1,857	2,823	1,740
Remora.....	8	6 20	8 6 20	8 14 10	8 23 45	British.....	N. Z. Shipping Co.....	435.0	62.3	27.0	London, England.....	Wellington, N. Z.....	General.....	4,256	11,911	8,945
Portland 1 1.....	7	1 20	8 8 10	8 15 17	8 16 30	German.....	Hamburg-American Line.....	462.2	61.2	19.1	Hamburg, Germany.....	Vancouver, B. C.....	General.....	2,810	9,139	6,666
Field City.....	8	4 10	8 8 35	8 16 23	8 17 40	American.....	Isthmian S. S. Lines.....	424.0	56.0	25.6	Philadelphia, Pa.....	Singapore.....	Steel, general.....	7,741	7,611	5,450
Jane.....	8	11 40	8 12 00	9 23 15	10 00 08	American.....	Arrow Line.....	409.5	54.2	21.4	Baltimore, Md.....	Seattle, Wash.....	General.....	5,298	6,615	4,966
Christenson.....	28	15 45	8 13 10	8 20 50	8 22 25	British.....	Pacific Steam Nav. Co.....	215.7	33.6	16.0	Cristobal, C. Z.....	Champerico, Guat.....	General.....	407	1,273	706
Acajula.....																
Point.....																
San Pablo.....	8	11 50	8 13 20	8 21 28	8 23 00	American.....	Gulf-Pacific Line.....	324.0	46.0	21.5	New Orleans, La.....	Vancouver, B. C.....	General, lumber	3,550	3,994	2,591
La Perla.....	8	14 30	8 14 45	8 22 58	8 23 58	American.....	United Fruit Co.....	325.2	48.1	18.10	Cristobal, C. Z.....	San Francisco, Cal.....	General, mules	186	4,033	2,261
Nosa Queen.....	7	16 45	8 14 45	8 23 03	8 23 03	American.....	N. O. & S. A. S. Co.....	324.0	46.2	21.3	Cristobal, C. Z.....	Corral, Chile.....	General.....	3,633	3,951	2,600
Eendijk.....	7	10 25	8 15 00	8 21 55	8 23 08	Dutch.....	Holland-American Line.....	469.7	58.3	20.5	Antwerp, Belgium.....	Vancouver, B. C.....	General, bananas	1,206	8,514	6,066
Atlas 1.....	8	19 30	8 19 45	9 11 29	9 12 40	American.....	Standard Transp. Co.....	439.0	58.2	20.0	New York, N. Y.....	Los Angeles, Calif.....	Ballast.....		7,348	5,164

* Timpalte and sulphate.

* Mine sweeper.

* Submarine tender.

* Submarine.

* Motor schooner.

* Motor ship.

* Mine planter.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rapahu	2	2 45	2	6 29	2	13 05	3	1 30	British	N. Z. Shipping Co.	457 3	58 4	21 4	Auckland, N. Z.	London, England	C. S. & general	2,850 ¹	9,079	6,798
Doflet	2	5 30	2	6 51	2	14 15	3	14 15	American	Redwood Line.	386 8	52 2	20 4	Seattle, Wash.	New Orleans, La.	Lumber, general	5,882	5,705	4,167
Ghost	2	9 40	2	10 31	2	18 30	2	19 45	American	C. W. Wirtz	355 3	48 5	24 0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	5,975	4,387	3,151
Woburn	2	10 15	2	11 06	2	19 05	3	19 05	British	Watts, Watts & Co.	390 0	54 2	26 0	Antofagasta, Chile	Acores ²¹	Nitrates	8,626	6,170	4,253
Kellogg	2	11 30	2	12 59	2	20 05	3	2 10	American	U. S. Tankship Corp.	472 9	61 1	24 0	Port Allen, T. H.	Antwerp, Belgium	Molasses	8,410	9,165	7,056
Meedijk	2	10 15	2	13 54	2	20 40	3	23 40	Dutch	Holland-America Line	438 2	55 3	25 4	Vancouver, B. C.	Hamburg, Germany	General	8,350	7,286	5,174
Amasia	2	13 45	2	17 59	2	11 05	3	11 05	German	Hamburg-America Line	434 0	58 3	25 0	Corral, Chile	Hamburg, Germany	(²²)	8,305		
Ruhr ¹⁸	2	23 30	3	6 12	3	14 15	3	16 55	American	Petroleum Nav. Co.	340 1	49 2	25 0	Los Angeles, Calif	Dublin, Ireland	Gasoline	5,200	4,613	2,996
Pueblo	2	13 30	3	6 35	3	15 15	3	16 55	British	King Line, Ltd.	412 4	55 8	28 3	Portland, Ore.	Bremen, Germany	Wheat	9,650	6,596	4,634
King Bledlyn.	3	1 00	3	7 23	3	14 45	3	19 35	American	North German Lloyd	495 5	63 8	29 0	Guaymas, Calif	New York, N. Y.	General	9,891	9,873	6,656
Brenaventura.	3	6 35	3	7 45	3	15 50	4	15 00	German	Panama R. R. S. S. Line	281 0	43 0	16 2	Guaymas, Calif	New York, N. Y.	General	1,377	2,873	1,776
Glenbank	3	6 55	3	8 09	3	17 15	3	23 30	British	Bank Line, Ltd.	430 4	53 9	24 0	Guaymas, Peru	Liverpool, England	Sugar	7,725 ¹	7,100	5,005
Durazo	3	8 00	3	8 53	3	17 40	3	23 30	German	Hamburg-America Line	227 5	34 4	13 3	Guaymas, Ecuador	Cristobal, C. Z.	(²⁴)	7,477	1,632	1,041
Nesa Prince	3	8 15	3	9 06	3	17 40	3	21 20	American	N. O. & S. A. S. S. Co.	324 0	46 2	24 2	Talcahuano, Chile	New Orleans, La.	Nitrates	4,649	3,983	2,570
India Arrow	3	12 15	3	12 56	3	20 50	3	20 50	American	Standard Transp. Co.	468 3	62 7	29 0	Los Angeles, Calif	Boston, Mass.	Light dist. fuel.	12,198	10,084	7,388
Chateau Thierry	4	6 21	4	6 21	4	13 40	5	11 00	American	U. S. Army	448 0	58 0	26 0	Balboa, C. Z.	New York, N. Y.	General	36		
Swan ¹⁹	4	6 30	4	6 30	4	13 30	5	11 00	American	U. S. Navy	187 0			Balboa, C. Z.	Cristobal, C. Z.	Ballast	11,298	10,084	7,388
China Arrow	4	15 20	4	6 37	4	14 45	4	14 45	American	Standard Transp. Co.	468 3	62 7	27 2	Los Angeles, Calif	New York, N. Y.	Gasoline	6,630	6,609	4,973
Chilcop	4	19 15	4	7 10	4	16 05	4	16 05	American	Chile S. S. Co.	411 5	54 1	22 0	Antofagasta, Chile	New York, N. Y.	Copper, ore	7,180	5,534	3,962
Zonave	4	6 30	4	9 15	4	18 50	4	18 50	British	Zinal S. S. Co.	370 9	51 0	24 0	Toromilla, Chile	Acores ²¹	Nitrate of soda	7,500	6,447	4,757
S-16 ²⁰	4	6 30	4	10 40	4	15 55	4	15 55	American	U. S. Navy	231 0	20 7		Balboa, C. Z.	Cristobal, C. Z.	Lumber, general	8,132	10,086	7,226
Bronoy ¹⁸	4	18 15	4	11 00	4	19 30	4	19 30	Norway	Canadian Transp. Co.	380 5	54 7	24 0	Vancouver, B. C.	Hull, England	General	8,500	7,963	5,837
Pacific	4	15 55	4	16 50	5	10 40	5	10 40	British	Furness, Withy & Co.	450 4	60 8	27 0	Vancouver, B. C.	Glasgow, Scotland	General	6,850	9,032	6,178
President ¹⁸	4	17 30	4	18 11	5	11 10	5	11 10	American	Amor-Havaiian Line	471 1	60 0	24 0	Portland, Ore.	Boston, Mass.	General	3,722	5,926	4,638
Nehaskan	4	17 30	4	18 11	5	11 10	5	11 10	American	Panama Mail S. S. Co.	380 6	48 7	23 0	San Francisco, Cal	New York, N. Y.	General	8,500	7,963	5,837
Enador	4	14 35	5	6 33	5	13 45			American	Hamburg-America Line	394 4	54 2	26 3	Vancouver, B. C.	Hamburg, Germany	General	8,114	6,571	4,607
Lauris	4	20 30	5	6 33	5	13 45			Norwegian	Fred Olsen & Co.	435 9	56 2	25 0	Vancouver, B. C.	Oslo, Norway	General	8,500	7,963	5,837
Svenson ¹⁸	4	20 30	5	6 33	5	13 45			German	Hamburg-America Line	394 4	54 2	26 3	Vancouver, B. C.	Oslo, Norway	General	8,114	6,571	4,607
Schwarzwald	5	4 15	5	7 12	5	15 20	5	17 20	American	U. S. Government	297 5	42 1	15 0	San Francisco, Cal	Kingston, Jamaica	(²³)	8,500	7,963	5,837
Edward	5	6 20	5	8 39	5	17 30	5	17 30	American	Luckenbach Line	436 6	57 2	31 0	Seattle, Wash.	Boston, Mass.	General, lumber	9,344	8,543	6,427
Scottsburg	5	20 00	5	12 47	5	19 50	5	19 50	American	Tampa Intercean Co.	419 5	56 5	22 0	Manila, P. I.	New Orleans, La.	General	5,321	8,696	6,316
Frontenon	5	14 45	5	15 23	5	22 30	5	22 30	British	R. Chapman & Son	436 0	60 0	27 0	Vancouver, B. C.	London, England	Wheat	10,220	8,144	6,028
Livenza	5	17 15	5	18 00	6	11 20	6	11 55	Italian	Navy, Libera-Tristina	404 6	54 5	26 0	Vancouver, B. C.	Naples, Italy	General	6,900	6,129	4,507
Agaworld ¹⁸	5	17 30	6	6 06	6	13 50	6	13 50	American	Richfield Oil Co.	429 0	59 2	26 0	Los Angeles, Calif	Norfolk, Va.	Gasoline	10,000	7,720	5,615

¹ Tanker. ¹⁷ Launch. ¹⁸ Motor ship. ¹⁹ Tug. ²⁰ Submarine.²¹ For orders. ²² General, saline, copper, and metal.²³ Salitre, sugar, cotton, and general.²⁴ Coffee, cocoa, and ivory nuts.²⁵ U. S. Coast Guard cutter.

Clio ²⁶	5	23	30	6	6	48	6	15	00	6	16	05	Danzig	Standard Oil Co.	424 0	53	2	27	4	Talara, Peru	Hamburg, Germany	Gasoline	11,324	9,248	6,310
Paul Shoup	6	3	40	6	7	04	6	15	00	6	15	05	American	Associated Oil Co.	420 4	58	2	28	0	Los Angeles, Calif	New York, N. Y.	Gasoline	10,140	7,333	5,182
Gracia	5	20	40	6	7	48	6	16	55	6	16	55	British	Donaldson Brothers	428 0	54	2	26	0	Vancouver, B. C.	Glasgow, Scotland	General	6,344	6,809	4,842
Justin	6	1	35	6	8	04	6	17	35	7	00	05	German	North German Lloyd	449 1	58	2	26	0	Vancouver, B. C.	Antwerp, Belgium	General	7,690	7,933	5,799
Manizales	6	7	45	6	9	10	6	17	55	6	9	00	German	Roland Line	476 5	32	9	14	0	Guayaquil, Ecuador	Cristobal, C. Z.	General	966	1,132	741
Keats	6	11	15	6	11	52	6	19	00	6	19	00	British	Shakspere Shipping Co	380 5	47	5	25	0	Seacliff, Chile	Azores ²⁸	Nitrates	5,940	4,691	3,382
Elisree Grange	6	6	30	6	12	26	6	20	30	6	20	30	American	Furuss-Pacific Line	420 0	53	5	24	0	Seattle, Wash.	Glasgow, Scotland	Fresh fruit	3,031	7,037	5,084
Lake Gorin	6	7	25	6	13	20	6	20	30	6	20	30	American	Port Motor Co.	250 5	43	6	19	0	Marfield, Oreg	New York, N. Y.	(²⁹)	2,413	2,692	1,808
La Perla	6	14	38	6	15	33	6	21	30	6	18	45	American	United Fruit Co.	325 2	48	1	20	0	San Francisco, Cal.	Cristobal, C. Z.	General	593	4,033	2,261
San Julian	7	00	40	6	16	33	6	18	45	7	18	45	American	States S. S. Co.	468 5	58	5	27	0	Portland, Oreg	London, England	Lumber, general	9,868	8,460	6,161
Flomar	7	1	45	7	6	54	7	15	25	7	16	00	American	Calmar S. S. Corp.	410 1	54	2	25	0	Portland, Oreg	New York, N. Y.	Lumber	7,503	6,604	4,655
Somerset	7	10	00	7	10	45	7	18	10	7	22	05	British	Federal Steam Nav. Co.	490 6	62	8	22	0	Lyttleton, N. Z.	London, England	Frozen, general	4,258	10,550	7,993
Kwanto	7	10	55	7	11	42	7	18	35	7	23	55	Japanese	Kishimoto Kisen Kaisha	490 7	61	6	21	0	Otari, Japan	New York, N. Y.	General	2,801		
Mernu ²⁶	7	11	30	7	12	20	7	20	45	7	22	55	American	U. S. Tankship Corp.	401 0	54	0	27	0	Honoupo, Hawaii	Mobile, Ala.	Molasses	7,377	6,205	4,286
Selota ²⁷	7	12	58	7	12	58	7	22	55	7	22	55	American	U. S. Navy	155 0	30	0			Balboa, C. Z.	Gamboa, C. Z.	Ballast			
California	7	11	55	7	13	05	7	22	20	7	22	20	American	Standard Oil Co. of Cal.	513 5	68	2	30	0	Los Angeles, Calif	London, England	Gasoline	15,365	11,719	8,619
Willpolo	7	12	10	7	13	24	7	22	55	7	22	55	American	Amer-Hawaiian Line	386 8	52	2	27	0	Seattle, Wash.	Baltimore, Md	General, lumber	6,482	5,680	4,080
New Jersey	7	18	00	7	14	00	8	14	00	8	14	00	American	The Texas Co.	416 8	56	1	20	0	Los Angeles, Calif	Providence, R. I.	Gasoline	7,852	6,925	5,014
Panama	7	20	20	8	6	27	8	15	20	8	15	20	American	Amer-Hawaiian Line	407 7	53	7	25	0	Seattle, Wash.	Boston, Mass	General	6,385	7,097	5,065
Point Sur	8	5	00	8	15	20	8	15	55	8	18	55	American	Gulf-Pacific Line	335 0	46	2	21	0	San Francisco, Cal.	New Orleans, La.	General	3,398	3,984	7,612
Brielle	8	5	30	8	7	10	8	20	10	9	1	40	Dutch	Royal Nedl. S. S. Co.	400 0	48	0	26	0	Corral, Chile	Hamburg, Germany	Nitrates, general	8,907	7,322	4,798
Panaghis	7	22	30	8	8	48	8	20	10	8	20	10	American	N. D. Lykiandopolis	400 0	52	4	26	0	Caleta Colosa, Chile	Azores ²⁸	Nitrate of soda	8,100		
Santa Clara	8	18	00	8	9	14	8	17	00	9	2	00	Colombian	Graco Line	483 3	63	9	25	0	Valparaiso, Chile	New York, N. Y.	General, copper	4,428	11,680	7,442
Caldas ²⁶	8	12	20	8	12	53	8	19	55					National Navigation Co.	116 0	21	1	11	0	Buenaventura, Col.	Cristobal, C. Z.	General	217	211	124

* Tanker.

²⁶ Motor ship.²⁷ Tug.²⁸ For orders.²⁹ Lumber, pulp, and auto parts.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 2	Calamara	United Fruit Co.	Port Limon, Costa Rica.	November 2	No. 9685 ³¹	Pan American Airways	San Salvador and wayp'gs.
November 2	Fernina Carvallo ³⁰	Ramon Carvallo	Colon, Rep. of Panama.	November 2	No. 142-M ³¹	Pan American Airways	Miami via wayports.
November 3	Tolos	United Fruit Co.	New York via Habana.	November 2	Orinoco	Hamburg-American Line	Hamburg via wayports.
November 3	No. 9670 ³¹	Pan American Airways	Sal Salvador and wayp'gs.	November 2	Calamars	United Fruit Co.	New York via Habana.
November 3	Darien C-35 ³²	Seattle Airplane Co.	Barranquilla, Colombia.	November 2	Dungannon	The Texas Co.	Tampico, Mexico.
November 4	Acacia ³²	U. S. Government	San Juan, Puerto Rico.	November 2	Fernina Carvallo ³⁰	Ramon Carvallo	San Andres, Colombia.
November 4	No. 300-N ³¹	Pan American-Grace Airways	Talara, Peru.	November 3	Annetta I. ³³	A. Tagaropolis	Colon, Rep. of Panama.
November 5	Cavina	Elders & Fyffes Line	Avonmouth via wayports.	November 3	Cavina	Elders & Fyffes Line	Avonmouth via wayports.
November 5	Ancon	Panama R. R. S. S. Line	New York via Haiti.	November 5	Tolos	United Fruit Co.	Port Limon, Costa Rica.
November 5	Santa Marta	United Fruit Co.	New York via Kingston.	November 5	No. 9670 ³¹	Pan American Airways	San Salvador and wayp'gs.
November 5	Tela	United Fruit Co.	New Orleans, La.	November 5	No. 9137 ³¹	Pan American Airways	Miami via wayports.
November 5	No. 8817 ³¹	Pan American Airways	San Jose, Costa Rica.	November 5	Tela	United Fruit Co.	Bocas, Rep. of Panama.
November 5	No. 9776 ³¹	Pan American Airways	Miami via wayports.	November 6	Annetta I. ³³	A. Tagaropolis	Colon, Rep. of Panama.
November 5	No. 9685 ³¹	Pan American Airways	San Salvador and wayp'gs.	November 6	Inapaguina ³³	A. Tagaropolis	Colon, Rep. of Panama.
November 6	Annetta I. ³³	A. Tagaropolis	Colon, Rep. of Panama.	November 6	Anacahueta ³³	United Fruit Co.	Colon, Rep. of Panama.
				* Other than ships passing through the Canal.			
				³⁰ Motor schooner.			
				³¹ Air mail carrier.			
				³² Light-house tender.			
				³³ Motor boat.			

* Other than ships passing through the Canal.

³⁰ Motor schooner.³¹ Air mail carrier.³² Lighthouse tender.³³ Motor boat.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 6	Inapaquina ³⁴	A. Tazaropulos	Colon, Rep. of Panama.	November 6	No. 309-N ³⁵	Pan American Airways	Curacao via wayports.
November 6	Anachucuma ³⁴	United Fruit Co.	Colon, Rep. of Panama.	November 6	Santa Marta	United Fruit Co.	New York via wayports.
November 6	Henry Horn	Aluminum Line	New Orleans, La.	November 7	Darien C-35 ³⁵	Seadta Airplane Co.	Barraquilla and wayp'ts.
November 6	Dorelian	Leyland S. S. Line	Liverpool via wayports.	November 7	No. 9688 ³⁵	Pan America Airways	San Salvador and wayp'ts.
November 7	Atlantida	Standard Fruit & S. S. Co.	New Orleans via Habana.	November 7	Acacia ³⁶	U. S. Government	Guantanamo, Cuba.
November 7	United Fruit Co.	United Fruit & S. S. Co.	New Orleans and wayp'ts.	November 7	Henry Horn	Aluminum Line	Moengo via wayports.
November 7	Bogota	Colombian S. S. Line	New York via wayports.	November 7	Dorelian	Leyland S. S. Line	Port Limon, Costa Rica.
November 8	Tela	United Fruit Co.	Bocas, Rep. of Panama.	November 8	Tela	United Fruit Co.	New Orleans and wayp'ts.
November 8	No. 309-N ³⁵	Pan American Airways	Curacao via wayports.	November 8	Atlantida	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
November 8	No. 142-M ³⁵	Pan American Airways	Miami via wayports.	November 8	Bogota	Colombian S. S. Line	New York via Kingston.
November 8	Camden	United Fruit Company	Curacao, D. W. I.	November 8	Coppename	United Fruit Co.	Bocas, Rep. of Panama.
November 8	No. 9670 ³⁵	Pan American Airways	San Salvador and wayp'ts.	November 8	Anachucuma ³⁴	United Fruit Co.	Colon, Rep. of Panama.
November 8	Nueva Espana ³⁴	Diez & Garcia	Colon, Rep. of Panama.	November 8	Nueva Espana ³⁴	Diez & Garcia	Colon, Rep. of Panama.
November 8	Anachucuma ³⁴	United Fruit Co.	Colon, Rep. of Panama.				
³⁴ Motor boat.				PORT OF BALBOA.			
³⁵ Air mail carrier.				³⁶ Lighthouse tender.			
October 10	Guardian	All America Cables	Iquique, Chile.	November 5	Maipo	Chilean Government	Los Angeles, Calif.
October 23	Arwyco	General Navigation Co.	Ensenada, Mexico.	November 10	Guardian	All America Cables	High seas.
November 4	Des Hermanos ³⁷	A. Valdez	Panama Bay, R. P.	November 7	Arwyco	General Navigation Co.	Ensenada, Mexico. ³⁸
November 4	Hans Elliot	Hans Elliot	Panama Bay, R. P.	November 7	Des Hermanos ³⁷	A. Valdez	Panama Bay, R. P.
November 7	Sambu ³⁷	Hans Elliot	Panama Bay, R. P.	November 5	Sambu ³⁷	Hans Elliot	Panama Bay, R. P.
November 7	Real ³⁷	Hans Elliot	Panama Bay, R. P.	November 7	Sambu ³⁷	Hans Elliot	Panama Bay, R. P.
November 7	Real ³⁷	Hans Elliot	Panama Bay, R. P.	November 8	Real ³⁷	Hans Elliot	Panama Bay, R. P.

³⁷ Motor schooner.³⁸ For orders.³⁹ Other than ships passing through the Canal.

Tanker Traffic Through the Panama Canal in October, 1930.

During the month of October, 1930, 93 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 531,036 on which tolls of \$466,530.01 were paid. Cargo amounted to 493,146 tons, which included 482,246 tons of mineral oils, 4,500 tons of creosote, and 6,400 tons of coconut oil. In point of net tonnage, tanker traffic decreased 18.3 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 22.4 per cent.

Tank vessels comprised 18.0 per cent of the total commercial transits through the Canal during the month; made up 20.5 per cent of the total Panama Canal net tonnage; were the source of 20.4 per cent of the tolls collected; and carried 20.6 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of October, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for October, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	47,501	\$35,602.23	7,603
Danish.....	1	6,310	4,543.20	.....
French.....	1	5,072	3,651.84	.....
Norwegian.....	5	27,267	19,632.24	.....
United States.....	28	165,943	123,833.62	17,892
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, September, 1930.....	50	283,237	209,912.77	16,241
Total, August, 1930.....	49	273,990	205,959.11	41,415
Total, October, 1929.....	57	317,788	234,524.45	25,093
<i>Pacific to Atlantic.</i>				
British.....	13	68,898	70,358.05	112,937
Danish.....	2	12,465	13,130.00	22,237
French.....	2	10,140	10,961.25	17,672
German.....	1	4,435	4,773.75	8,414
Norwegian.....	4	22,098	21,761.93	30,914
United States.....	27	160,907	158,281.90	275,477
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, August, 1930.....	46	252,114	255,990.30	449,022
Total, October, 1929.....	60	332,356	338,648.49	610,165

* Includes 4,500 tons creosote.

* Includes 6,400 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during October, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	26	149,912	\$108,002.79	.....
United States to South America.....	3	14,424	10,385.28	.....
Canadian intercoastal.....	1	4,284	3,838.75	4,500
Canada to South America.....	1	7,648	5,506.56	.....
Central America to South America.....	1	3,892	4,203.75	7,603
West Indies to United States.....	1	5,132	3,695.04	.....
West Indies to South America.....	1	7,363	8,835.60	13,392
Europe to United States.....	9	53,128	38,252.16	.....
Europe to South America.....	1	6,310	4,543.20	.....

* Creosote.

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	24	146,850	\$144,825.30	261,454
United States to Central America.....	1	5,423	3,904.56	.....
United States to West Indies.....	2	10,544	7,591.68	.....
United States to Europe.....	12	60,422	63,843.75	107,103
South American to United States.....	4	20,863	22,722.50	39,949
South America to Canada.....	2	14,420	15,457.50	31,293
South America to West Indies.....	1	3,892	2,802.24	.....
South America to Europe.....	2	12,616	13,423.75	21,452
Philippine Islands to United States.....	1	3,913	4,695.60	6,400

* Coconut oil.

Of the tanker traffic passing through the Canal in October, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for October, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
October, 1930.....	33	192,300	\$138,456.00	.....
September, 1930.....	36	210,397	152,995.07	7,909
August, 1930.....	33	193,904	159,567.59	.....
October, 1929.....	40	227,317	165,551.16	1,040
<i>From Los Angeles.</i>				
October, 1930.....	34	198,336	193,930.29	328,365
September, 1930.....	29	166,508	169,483.10	300,859
August, 1930.....	33	183,370	185,721.60	325,811
October, 1929.....	41	226,240	227,992.50	409,611

Traffic by Nationality for October, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of October, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for October, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	81	423,760	306,935	506,775	306,236	\$336,512.32	166,811
Chilean.....	2	8,200	5,586	11,480	6,417	6,982.50	2,068
Colombian.....	5	881	856	1,285	858	1,042.10	1,215
Danish.....	6	27,235	20,213	31,294	20,393	21,558.32	8,549
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	.....
Dutch.....	6	28,598	17,340	29,746	17,884	21,675.00	11,010
French.....	6	34,653	24,659	40,305	24,002	28,985.59	14,400
German.....	13	53,670	38,298	63,215	38,258	47,298.60	27,800
Greek.....	1	3,429	2,231	3,536	2,223	2,468.88	.....
Italian.....	4	24,044	19,729	31,713	18,601	20,080.87	3,542
Japanese.....	8	42,546	35,197	53,778	35,072	43,840.15	45,880
Norwegian.....	19	91,882	65,088	106,205	63,982	70,661.30	55,837
Panamanian.....	1	20	15	20	16	14.40	.....
Spanish.....	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Swedish.....	2	9,415	6,633	20,297	8,050	6,849.62	4,120
United States.....	107	591,778	443,387	720,823	441,442	504,494.95	303,721
Total, October, 1930.....	265	1,354,693	998,506	1,640,251	995,155	1,123,888.16	649,853
Total, October, 1929.....	277	1,394,206	1,049,506	1,728,277	1,050,939	1,195,727.56	848,347
Total, October, 1928.....	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	3	17,243	12,244	19,510	11,489	\$15,305.00	26,850
British	63	291,502	224,568	373,027	228,176	285,311.80	379,263
Chilean	2	9,377	6,899	14,620	7,952	8,623.75	6,760
Colombian	4	574	554	880	550	682.10	750
Danish	4	23,451	15,723	26,346	16,354	19,653.75	31,733
Danzig	2	12,465	10,504	17,895	10,048	13,130.00	22,237
Dutch	6	24,735	16,655	27,853	16,906	20,818.75	31,487
French	6	32,809	23,703	39,697	23,412	29,628.75	48,524
German	15	60,735	43,808	72,370	43,761	54,760.00	84,636
Italian	3	24,683	14,764	30,485	18,027	18,455.00	14,778
Japanese	14	66,140	60,323	83,605	57,512	74,653.55	92,204
Norwegian	15	77,511	53,428	88,678	53,525	63,903.97	96,851
Peruvian	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Swedish	4	18,245	12,945	40,221	15,634	16,181.25	56,631
United States	108	556,243	426,624	695,052	426,316	530,475.95	829,326
Yugoslav	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total, October, 1930.	252	1,229,467	933,658	1,547,249	940,141	1,165,093.92	1,744,557
Total, October, 1929.	287	1,353,743	1,029,194	1,690,057	1,032,129	1,290,170.15	1,997,296
Total, October, 1928.	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836

* Includes 3 naval vessels having a total of 16,030 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian	3	17,243	12,244	19,519	11,489	\$15,305.00	26,850
British	144	715,262	531,503	879,802	534,412	621,824.12	546,074
Chilean	4	17,577	12,485	29,100	14,369	15,606.25	8,828
Colombian	9	1,455	1,410	2,165	1,408	1,724.20	1,965
Danish	10	50,686	35,936	57,740	36,747	41,212.07	40,282
Danzig	3	18,775	15,850	26,835	15,098	17,673.20	22,237
Dutch	12	53,333	33,905	57,599	34,790	42,493.75	42,497
French	12	67,462	48,362	80,002	47,414	58,614.34	62,924
German	28	114,405	82,106	135,785	82,019	102,058.60	112,436
Greek	1	3,429	2,231	3,536	2,223	2,468.88	
Italian	7	48,727	34,493	62,198	36,628	38,535.87	18,320
Japanese	22	108,686	95,520	137,383	92,584	118,493.70	138,084
Norwegian	34	169,393	118,516	194,883	117,507	134,565.27	152,688
Panamanian	1	20	15	20	16	14.40	
Peruvian	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Spanish	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Swedish	6	27,660	19,578	60,518	23,684	23,030.87	60,751
United States	215	1,148,021	870,011	1,415,875	867,758	1,034,970.90	1,133,047
Yugoslav	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total, October, 1930.	517	2,584,160	1,932,164	3,187,500	1,935,296	2,288,982.08	2,394,410
Total, October, 1929.	564	2,747,949	2,078,700	3,418,334	2,083,068	2,485,897.71	2,845,643
Total, October, 1928.	557	2,515,380	1,918,911	3,155,239	1,922,785	2,274,945.30	2,582,477

* Includes 3 naval vessels having a total of 16,030 displacement tons.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Water Supply During First Ten Months of 1930.

The Section of Surveys reports that during the 10-month period, January to October, inclusive, in 1930, the rainfall over the Atlantic and Pacific entrances to the Canal has been about 81 per cent of the average. The net yield of the Gatun Lake watershed has been only 66 per cent of the average, or 84 billion cubic feet as compared with a 17-year average of 127 billion cubic feet. This is a low record for net yield from January to October, inclusive, since the formation of Gatun Lake, which is considered to date from January, 1914, when the lake surface was raised to approximately 85 feet above sea level.

In 1905 the discharge of the Chagres River at Alhajuela from January to October, inclusive, amounted to 40 billion cubic feet compared with 46 billion cubic feet so far this year, but any attempt to convert this 40 billion of Chagres yield into a probable net yield over the lake watershed is liable to be very misleading. The Gatun Lake watershed net yield from January to October, inclusive, since the formation of Gatun Lake is shown below in billion cubic feet:

Year.	Net yield.	Year.	Net yield.
	<i>Billions of cu. ft.</i>		<i>Billions of cu. ft.</i>
1914.....	115	1922.....	128
1915.....	167	1923.....	146
1916.....	143	1924.....	136
1917.....	142	1925.....	101
1918.....	149	1926.....	105
1919.....	109	1927.....	180
1920.....	112	1928.....	125
1921.....	119	1929.....	104
		1930.....	84

Prophecy of weather on the Isthmus is extremely conjectural but the indications from past experience are that the coming dry season will begin early and be unusually dry. Unless conditions change materially this month, the raising of the surface elevation of Gatun Lake to 87 feet above sea level for the beginning of the dry season will probably take place earlier this year than usual.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending November 8, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Arweco.....	General Navigation Co.....	October 23...	November 7...	21	981
Heron.....	H. H. Smith Sorensen.....	October 25...	October 30...	7,406	1
Geisha.....	Knut Knudsen.....	October 26...	October 26...	4	
Acajutla.....	Pacific Steam Navigation Co.....	October 27...	October 28...	1	
Chaumont.....	U. S. Government.....	October 27...	October 29...	17	
Bodegraven.....	Royal Netherlands S. S. Co.....	October 28...	October 28...	158	
Santa Maria.....	Grace Line.....	October 29...	October 29...	12	6
Wichita.....	Roosevelt S. S. Co.....	October 31...	October 31...	424	
Virginia.....	Panama-Pacific Line.....	October 31...	October 31...		210
San Rafael.....	Quaker Line.....	October 31...	November 1...	47	
Chateau Thierry.....	U. S. Government.....	October 31...	November 4...	269	36
Bronnoy.....	Canadian Transport Co.....	November 3...	November 4...	372	
Santa Rita.....	Grace Line.....	November 4...	November 4...	20	14
Siam.....	East Asiatic Co.....	November 4...	November 4...	65	
El Salvador.....	Panama Mail S. S. Co.....	November 4...	November 5...	10	16
Scottsburg.....	Tampa Intercoast S. S. Co.....	November 4...	November 5...	166	
Ecuador.....	Panama Mail S. S. Co.....	November 4...	November 5...	103	
Manizales.....	North German Lloyd.....	November 6...	November 6...	2	
Santa Clara.....	Grace Line.....	November 8...	November 8...	1	

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending November 8, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Rialto.	Italian Line.		October 26.		151
Daytonian.	Leyland Line.		October 27.		39
Cristobal.	Panama R. R. S. S. Line.		October 28.		359
Salvador.	Pacific Steam Navigation Co.		November 1.		610
Ulua.	United Fruit Co.	October 26.	October 26.	34	534
Sacramento.	Nelson Line.	October 26.	October 27.	453	(²)
Cauca.	National Navigation Co.	October 26.	November 1.	175	211
Ammon.	Hamburg-American Line.	October 27.	October 27.	23	26
Santa Elisa.	Grace Line.	October 27.	October 27.	188	(²)
Almagro.	Pacific Steam Navigation Co.	October 10.	October 28.	99	63
Van Rensselaer.	Royal Netherlands S. S. Co.	October 27.	October 28.	132	(²)
Bodegraven.	Royal Netherlands S. S. Co.	October 27.	October 28.	135	22
Schwaben.	North German Lloyd.	October 27.	October 28.	76	23
Ester Thorden.	Aluminium Line.	October 27.	October 28.	238	353
Calamares.	United Fruit Co.	October 27.	October 29.	495	14
Acajutla.	Pacific Steam Navigation Co.	October 28.		119	
Orinoco.	Hamburg-American Line.	October 28.	October 28.	99	(²)
Carl Legien.	Hamburg-American Line.	October 28.	October 29.	(²)	82
Orazio.	Italian Line.	October 28.	October 30.	93	274
Canadian Transporter.	Canadian National Steamships.	October 29.	October 29.	30	(²)
Aconcagua.	Chilean Line.	October 29.	October 29.	28	5
San Felipe.	Quaker Line.	October 29.	October 29.	148	47
Santa Maria.	Grace Line.	October 29.	October 29.	113	24
Iriona.	United Fruit Co.	October 29.	October 30.	1,587	42
Buenos Aires.	Spanish Line.	October 29.	October 30.	200	494
Zacapa.	United Fruit Co.	October 29.	October 30.	617	722
Cali.	North German Lloyd.	October 29.	November 1.	508	259
Swiftsure.	C. D. Mallory & Co.	October 29.	October 30.	11,716	(²)
Dinteldijk.	Pacific Steam Navigation Co.	October 30.	October 30.	(²)	33
Flandre.	French Line.	October 30.	October 30.	226	120
Colombo.	Italian Line.	October 30.	October 31.	385	390
Alaska.	French Line.	October 30.	October 31.	212	(²)
Guayaquil.	Panama R. R. S. S. Line.	October 30.	November 1.	852	(²)
Suriname.	United Fruit Co.	October 31.	November 1.	1,189	(²)
Wichita.	Roosevelt Line.	October 31.	November 1.	368	(²)
Dugannon.	The Texas Oil Co.	October 31.	November 1.	10,500	(²)
Illinois.	The Texas Oil Co.	October 31.	November 1.	650	(²)
Delftdijk.	Pacific Steam Navigation Co.	October 31.	November 1.	40	439
Camden.	United Fruit Co.	October 30.	November 1.	9,295	(²)
Amapala.	Standard Fruit & S. S. Co.	October 31.	November 1.	189	472
Creole Lindo.	Creole Petroleum Co.	November 1.	November 1.	3,149	
Boskoop.	Royal Netherlands S. S. Co.	November 1.	November 1.	257	31
Iriona.	United Fruit Co.	November 1.	November 1.	(²)	82
Cid.	Pacific Steam Navigation Co.	November 1.	November 1.	111	2
Guayaquil.	Panama R. R. S. S. Line.		November 1.		179
Daytonian.	Leyland S. S. Line.		November 1.		83
Van Rensselaer.	Royal Netherlands S. S. Co.		November 1.		299
Bitterfield.	Hamburg-American Line.		November 1.		266
Acajutla.	Pacific Steam Navigation Co.		November 8.		889
Orinoco.	Hamburg-American Line.	November 1.	November 2.	(²)	183
Moerdyk.	Pacific Steam Navigation Co.	November 2.	November 2.	(²)	129
Winnepeg.	French Line.	November 2.	November 2.	97	112
Balboa.	Johnson Line.	November 2.	November 2.	(²)	67
Calamares.	United Fruit Co.	November 2.	November 2.	14	982
Durazzo.	Hamburg-American Line.	November 3.		527	
Este.	North German Lloyd.	November 3.	November 3.	14	63
Kellerwald.	Hamburg-American Line.	November 3.	November 3.	307	96
El Salvador.	Panama Mail S. S. Co.	November 3.	November 3.	383	524
Santa Rita.	Grace Line.	November 3.	November 4.	87	164
Buenaventura.	Panama R. R. S. S. Co.	November 3.	November 4.	230	
Tolosa.	United Fruit Co.	November 3.	November 5.	333	23
San Marcos.	Quaker Line.	November 4.	November 4.	246	(²)
Sham.	United Fruit Co.	November 4.	November 4.	59	(²)
Gregalia.	Donaldson Brothers.	November 4.	November 5.	(²)	332
Ancon.	Panama R. R. S. S. Co.	November 5.		3,567	
Tela.	United Fruit Co.	November 5.	November 5.	662	44
Santa Marta.	United Fruit Co.	November 5.	November 6.	359	464
Ecuador.	Panama Mail S. S. Co.	November 5.	November 6.	580	2
Cargo Reliance.	Furness, Withy & Co.	November 5.	November 7.	(²)	331
Lauritz Swenson.	Fred Olsen & Co.	November 5.	November 8.	(²)	126
Manizales.	North German Lloyd.	November 6.		1,655	
Tolton.	Chilean S. S. Line.	November 6.	November 6.	(²)	28
Henry Horn.	Aluminium Line.	November 6.	November 6.	1,175	110
Justin.	North German Lloyd.	November 6.	November 6.	(²)	243
Oropesa.	Pacific Steam Navigation Co.	November 6.	November 6.	47	23
Dorelian.	Leyland S. S. Line.	November 6.	November 7.	370	(²)
Bogota.	United Fruit Co.	November 7.	November 7.	97	59
Kwanto Maru.	Osaka Shosen Kaisha.	November 7.	November 7.	229	60
Coppename.	United Fruit Co.	November 7.	November 8.	60	47

* No cargo discharged.

* No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged.	Laded.
				<i>Tons.</i>	<i>Tons.</i>
La Perla	United Fruit Co.	November 7 ..	November 8 ..	784	260
Nosa Queen	N. O. & S. A. S. S. Co.	November 7 ..	November 8 ..	98	1,246
Eemdyk	Pacific Steam Navigation Co.	November 7 ..	November 8 ..	286	171
Portland	Hamburg-American Line	November 7 ..	November 8 ..	56	244
Atlantida	Standard Fruit & S. S. Co.	November 7 ..	November 8 ..	68	322
Caldas	United Fruit Co.	November 8 ..		217	
Camden	United Fruit Co.	November 8 ..		4,428	
Tela	United Fruit Co.	November 8 ..	November 8 ..	199	487

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls	
Ward 7, White females, private rooms	
Ward 8, Obstetrical department, white females	} No visitors permitted in nursery.
Nursery	
Section "C:"	
Ward 9, Colored, male	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male	
Ward 11, Colored, male (surgical)	
Ward 12, Colored, male (medical)	
Ward 13, Colored, male, G. U.	
Ward 14, White, male, G. U.	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical)	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical)	
Ward 17, Colored children	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical)	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical	
Isolation section	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office.

Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

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Cargo Through the Canal During October, 1930.

On pages 220 and 221 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in October, 1930. This cargo, segregated according to direction, as compared with October, 1929, and the differences, are shown in the following tabulation:

	October, 1929.	October, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	848,347	649,853	-198,494
Pacific to Atlantic.....	1,997,296	1,744,557	-252,739
Total.....	2,845,643	2,394,410	-451,233

It will be noted from the above that the Atlantic to Pacific tonnage decreased 198,494 tons, or 23.4 per cent, as compared with October, 1929, and that from the Pacific to the Atlantic decreased 252,739 tons, or 12.7 per cent, making a total decrease of cargo tonnage in both directions of 451,233 tons, or 15.9 per cent. As in the past several months, the heavy decline in Pacific-bound tonnage has been due to a general curtailment in shipments and to decreases in cargo tonnage of several important commodities as indicated under "Principal commodities." The Atlantic-bound tonnage, while showing increases in many of the ordinarily important commodities, particularly food products, was depressed by heavy decreases in the shipments of mineral oils and nitrates.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and eight-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 22.3 per cent in Europe. Tonnage from the United States decreased 135,531 tons, or 24.6 per cent, in comparison with October, 1929, and that from Europe declined 73,777 tons, or 33.8 per cent. The proportion of the tonnage from each of these areas to the total tonnage also was slightly lower in October, 1930.

Destination.—Thirty-nine and one-tenth per cent of the Pacific-bound tonnage was destined to the United States; 23.1 per cent to Asia; 16.2 per cent to South America; and 12.6 per cent to Australasia. Cargo tonnage to all these areas declined as compared with October, 1929, as follows: To the United States, 108,281 tons, or 28.4 per cent; to Asia, 28,464 tons, 15.9 per cent; to South America, 28,763 tons, or 21.4 per cent; and to Australasia, 42,204 tons, or 34 per cent. With respect to the proportion of the cargo to these various areas to the total Pacific-bound tonnage, slight increases were registered in that to Asia and South America, while that to the United States and Australasia decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 54.3 per cent came from the United States; 28.1 per cent from South America; 10.1 per cent from Canada; 4.0 per cent from Asia; and 2.4 per cent from Australasia. Tonnage from Canada and Asia showed proportionate as well as actual increases of 60,757 tons, or 52.8 per cent, and 9,586 tons, or 15.7 per cent, respectively, as compared with October, 1929. Tonnage from the United States, South America, and Australasia decreased proportionately as well as in actual tonnage in the amounts of 184,077 tons, or 16.3 per cent; 127,355 tons, or 20.7 per cent; and 26,743 tons, or 39.1 per cent. Increases in the shipments of several items, particularly wheat, was the cause of the exceptionally large proportionate increase of tonnage from Canada.

Destination.—Segregated according to destination, 53.9 per cent of the cargo tonnage in this direction went to the United States, and 40.3 per cent to Europe. While slightly greater in its proportion to the total tonnage than in October, 1929, the actual tonnage to the United States decreased 129,603 tons, or 12.1 per cent. Cargo tonnage to Europe decreased in actual tonnage in the amount of 67,562 tons, or 8.8 per cent, while its proportion to the total tonnage was greater in October, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for October, 1929, or October, 1930, are listed in the following tabulation, showing differences:

Commodity.	October, 1929.	October, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	19,755	7,491	-12,264
Cement.....	36,647	14,062	-22,585
Chemicals.....	12,772	5,223	-7,549
Coal and coke.....	22,681	10,853	-11,828
Cotton.....	33,117	39,846	+6,729
Manufactured goods:			
Iron and steel.....	200,858	109,683	-91,175
Machinery.....	15,520	11,849	-3,671
Railroad material.....	13,535	7,093	-6,442
Tinplate.....	23,455	13,355	-10,100
Textiles.....	10,792	10,189	-603
Miscellaneous.....	14,591	12,524	-2,067
Metals, various.....	23,182	11,120	-12,062
Oils, mineral.....	51,371	54,924	+3,553
Paper.....	22,373	18,493	-3,880
Phosphates.....	36,597	25,469	-11,128
Sulphur.....	30,982	30,573	-409
Tobacco.....	11,317	10,664	-653

The above 17 commodity groups for October, 1930, comprise 61.3 per cent of the cargo moving from the Atlantic to the Pacific. Except for two small increases—in cotton and mineral oils—all items showed decreases as compared with October, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify over 98 per cent of all cargo moving from the Pacific to the Atlantic during the month of October, 1930. Com-

modities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	October, 1929.	October, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	27,642	24,916	-2,726
Beans.....	10,983	13,559	+2,576
Canned goods (fish, fruit, vegetables, etc.).....	102,898	145,341	+42,443
Cold storage (food products) *.....	21,515	17,790	-3,725
Flour.....	10,277	11,797	+1,520
Fruit, dried.....	30,648	43,941	+13,293
Fruit, fresh.....	12,855	17,342	+4,487
Lumber.....	322,170	238,501	-83,669
Metals (principally copper).....	59,601	45,787	-13,814
Nitrates.....	274,583	138,681	-135,902
Oils, mineral.....	605,365	455,268	-150,097
Ores (principally iron).....	151,271	174,267	+22,996
Paper.....	12,683	10,740	-1,943
Rice.....	8,816	17,558	+8,742
Sugar.....	62,480	51,742	-10,738
Wheat.....	124,105	169,165	+45,060

* Fresh fruit not included.

The above 16 commodity groups comprise 90 per cent of the cargo moving from the Pacific to the Atlantic during October, 1930. Eight of the items showed increases and 8 decreases. With the exception of ores all increases were in food products. Wheat and canned goods showed the heaviest increases, while mineral oils and nitrates registered the heaviest decreases.

(Continued on next page.)

Pacific Steam Navigation Company Withdraws "Ebro" and "Essequibo."

The Pacific Steam Navigation Company has announced the temporary withdrawal from its service between New York and the west coast of South America of the passenger and freight steamers *Ebro* and *Essequibo*, effective with the northbound transit of the Canal of the *Ebro* on November 14, 1930. The *Ebro* first transited the Canal on October 28, 1919, and the *Essequibo* on July 10, 1920, and both vessels have been operating through the Canal regularly since that time.

The cargo service of this company operating between New York, Colombian, Ecuadorian, and Peruvian ports, via the Canal, in addition to its other services serving the Canal, will continue to be maintained.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending November 15, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Mataroa.....	Shaw, Savill & Albion.....	November 9..	November 9..	16	.....
Minden.....	North German Lloyd.....	November 9..	November 9..	36	.....
Heiyo Maru.....	Nippon Yusen Kaisha.....	November 11.	November 11.	137	.....
Taketoyo Maru.....	Nippon Yusen Kaisha.....	November 11.	November 11.	144	.....
Vega.....	U. S. Government.....	November 11.	November 11.	143	29
Santa Inez.....	Grace Line.....	November 11.	November 11.	.....	2
Almelo.....	Royal Netherlands S. S. Co.....	November 12.	November 12.	101	.....
Santa Barbara.....	Grace Line.....	November 13.	November 13.	30	.....
City of San Francisco.....	Panama Mail S. S. Co.....	November 13.	November 13.	122	.....
Patrick Henry.....	Tampa Intercean S. S. Co.....	November 13.	November 13.	261	.....
Kim.....	Sverre Sturlung.....	November 13.	November 14.	5,069	.....
Ansgir.....	North German Lloyd.....	November 14.	November 15.	282	98
Pennsylvania.....	Panama-Pacific Line.....	November 14.	November 14.	.....	175

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, October, 1930.—Continued from page 219.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.				ASIA.					Grand total.	Per cent of total cargo.
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. *	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. †	Total, South America.	Australia.	New Zealand.	Australasia. †	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East. †	Total, Asia.		
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports.....	168,267	1,960	816	18,111	289	182,350	15,193	343	558	3,277	4,306	23,677	9,950	3,532	13,482	13,624	274,199	765,144	493,721	156,201	685,449	44.9	
South Atlantic ports.....	3,217					3,217	7,603					7,603				208	2,508	1,989	913	5,618	8,835	1.4	
Gulf ports.....	29,812	7,424				37,236	2,366	101	211	224	2	2,904	1,220	5,280	3,249	9,749		13,104	42,833	8,306	64,243	114,132	17.5
Total, United States.....	201,296	9,384	816	18,111	289	222,803	17,559	444	769	3,501	4,308	26,581	11,170	8,812	3,249	23,231	13,832	39,886	64,587	23,712	142,017	414,632	63.8
Canada—																							
East coast of Canada.....	6,700					6,700	7,603					7,603	1,899	6,142	8,011						14,711	2.3	
East coast of Central America.....	3,089	464	331			7,466	756	881	662	369	348	3,016	8,502		8,502						17,874	2.7	
Cristobal, C. Z. *		4,181	20			4,201	13,409		105			13,514						7,100			7,100	24,815	3.8
West Indies.....																							
Total, North America.....	204,385	20,311	6,936	18,111	289	242,939	39,327	1,325	1,536	3,870	4,656	50,714	21,541	14,954	3,249	89,744	13,832	46,986	64,587	23,712	149,117	482,514	74.2
Europe:																							
British Isles.....	2,586	5,434		14		8,034	1,913	14		5,535	6,554	14,016										61,309	9.4
Belgium.....	11,641	3,451	273	347		15,712	2,307		911	150	1,066	4,434									20,146	3.1	
Denmark.....	80	2				82															82	0.6	
France.....	2,562	755	139			3,456	237		82	50		369			93	93					3,918	0.6	
Germany.....	2,392	543	958	49		3,942	373	886	69	394	30	1,752									5,694	0.9	
Holland.....	2,406	353	234			2,993	1,920	31	68	1,145	52	3,216									6,209	1.0	
Italy.....	931	621	670	15		2,237	39			37		474									2,787	0.4	
Norway and Sweden.....	4,353	40		556		4,953	21				3,012	3,033									7,986	1.2	
Spain and Portugal.....	1,140	75				1,215															215	0.5	
Europe †.....	5,493	1,422		75		6,915	522			26,120	26,642				2,862	2,862					36,419	5.7	
Total, Europe.....	32,584	12,621	2,119	1,215		48,539	7,332	931	1,130	7,311	37,308	54,012		35,259	6,955	42,214					144,765	22.3	
East coast of South America.....	16,552	4,174			81	20,837		763				763							974		974	22,574	3.5
Grand total.....	253,551	37,106	9,055	1,314	11,289	312,315	46,659	3,019	2,660	11,181	41,904	105,493	21,541	50,213	10,204	81,958	13,832	46,986	65,561	23,712	150,091	649,853	100.0
Per cent of total cargo:																							
October, 1930.....	39.1	5.7	1.4	0.2	1.7	48.1	7.2	0.5	0.4	1.7	6.4	16.2	3.3	7.7	1.6	12.6	2.1	7.2	10.1	3.7	23.1	100.0	.....
October, 1929.....	42.7	2.3	1.9	0.2	1.4	48.5	7.4	1.0	0.5	2.0	4.9	15.8	5.0	8.8	0.8	14.6	2.0	4.1	10.5	4.5	21.1	100.0	.....
October, 1928.....	42.7	2.0	3.0	1.0	0.6	49.3	7.6	1.2	0.5	1.8	3.7	11.8	5.7	7.2	1.3	14.2	2.3	6.1	13.2	3.1	24.7	100.0	.....

* General cargo not routed so as to allow segregation between definite ports.

† Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, October, 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand total.	Per cent of total cargo.
	UNITED STATES.					NORTH AMERICA.					EUROPE.													
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	Egypt.		
NORTH AMERICA:																								
West coast of U. S.	504,018	13,964	37,890	615,872	1,050	2,149	4,562	623,633	189,699	9,624	1,978	7,705	28,846	14,941	237	1,315	45	48,262	312,652	11,324	947,609	54.3		
West coast of Canada	16,791	2,500		16,791	129	51	3,164	37,135	67,044	1,604	3,050	3,805	4,558	13,123	598	4,054	3,223	39,187	137,023	1,719	175,877	10.1		
West coast Cen. Amer.	2,500			2,500		1,242	50	3,762		278								89	3,312		7,104	0.4		
Hawaiian Islands	11,804			11,804				11,804							500				778		12,582	0.7		
Total, N. America.	595,113	13,964	37,890	646,967	1,129	3,442	7,776	676,304	256,743	11,506	5,028	21,510	33,404	28,564	835	5,369	3,208	87,538	453,765	13,043	1,143,172	65.5		
SOUTH AMERICA:																								
Chile	171,431	17,663	10,776	199,870		564	1,462	201,986	20,787	6,988	825	3,847	3,528	733	2,923	563	792	106,809	147,795	32	349,723	20.0		
Colombia	953			953		2,441	119	3,513											3,517	0.2		3,517	0.2	
Ecuador	21,343			21,343		2,966	42	24,351	384										384			24,735	1.4	
Peru	28,961			28,961	293	179	6	69,439	15,645	811	2,264	541	2,653	10	10,122	550		12,086	44,682		105,121	6.2		
W. coast of S. America.	2,058	2,000		4,058		1,313	46	5,417						71	139			683	893		6,310	0.3		
Total, S. America.	224,740	19,663	10,776	255,185	293	7,463	1,675	295,616	36,816	7,799	3,089	4,388	6,252	743	3,062	10,685	1,342	119,578	193,754	36	489,406	28.1		
AUSTRALASIA:																								
Australia	8,238			8,238	2,814			11,052														11,055	0.6	
New Zealand	996			996	88	27		1,111	22,431										22,431			23,542	1.4	
Australasia									7,030										7,030			7,030	0.4	
Total, Australasia.	9,234			9,234	2,902	27		12,163	29,461										29,461			41,627	2.4	
ASIA:																								
Philippine Islands	15,740			15,740				22,140														22,140	1.2	
China	2,519			2,519		346		2,865														2,865	0.2	
Japan	1,707			1,707				1,707														1,704	0.1	
Far East	2,144			2,144		166	22	14,136	16,408	26,241											26,241	931	43,640	2.5
Total, Asia.	22,110			22,110		166	368	43,180	26,241													70,352	4.0	
Grand total.	851,203	33,627	55,066	939,896	51,324	1,216	11,300	23,587	1,027,323	319,291	19,305	8,117	25,898	39,656	29,307	3,897	16,054	4,610	207,116	703,221	14,013	1,744,557	100.0	
Per cent of total cargo:																								
October, 1930.	48.8	1.9	3.2	53.9	2.9	0.1	0.6	1.4	58.9	20.0	1.1	0.5	1.5	2.3	1.7	0.2	0.9	0.3	11.8	40.3	0.8	100.0		
October, 1929.	48.7	0.9	3.9	53.5	4.9	0.6	1.2	60.2	16.7	0.6	0.2	1.6	2.5	0.8	1.2	1.5	0.3	13.2	38.6	0.7	100.0			
October, 1928.	44.9	1.4	3.2	49.5	3.1	0.7	1.5	56.3	18.4	0.8	0.2	2.4	2.8	2.1	1.1	0.5	2.0	11.5	41.8	0.5	100.0			

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 15, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Manizales	6	17	55	9	6	00								General.	67	1,132	741
Manatwary	8	19	50	9	14	33	9	16	50	39.0	54.2	24.0	Cristobal, C. Z.	Crossed.	4,102	6,205	4,339
Chinese																	
Prince	8	22	15	9	7	20								General.	2,122	9,254	6,265
Alamar	8	22	25	9	7	55								Steel, general.	6,137	7,351	5,595
Dakota	8	22	40	9	8	30								General.	3,347	7,156	5,094
S-10	8	22	40	9	9	30								Ballast.	2094		
Durazo	8	13	55	9	9	45								General.	2,156	8,878	6,583
Nebraska	9	00	15	9	10	40								Gen., clay, coke	1,233	11,170	8,208
Port Hunter	9	3	50	9	11	18								General.	8,098	7,611	5,450
Chattanooga	9	11	20	9	12	00								General.	4,614	6,624	4,883
City	9	12	25	9	12	45								Ballast.	7,426	5,073	
Pacific Fir	9	22	50	10	6	15								Ballast.	1,750	6,406	4,336
Antietam	10	6	30	10	7	15								General.	1,753	7,621	5,470
Svalder	10	7	55	10	8	35								General.	3,851	8,219	5,861
City of Derby	10	7	55	10	8	35								General.	1,048		
Salinas	10	9	10	10	9	40								General.	9,698	6,862	
Jason	10	7	15	10	10	40								General.	5,253	5,456	3,797
Silverash	10	15	55	10	16	05								General.	2,354	6,779	4,921
Vega	10	17	35	11	6	05								General.	5,901	9,655	6,849
Scotia	10	15	55	11	6	05								General.	7,684	7,611	5,450
Sylvan Arrow	10	21	05	11	7	25								Towing barge 2.	3,023	9,262	6,853
G. C. Brovig	10	23	10	11	9	50								Ballast.	6,289	4,723	
Indra	11	12	00	11	12	10								General.	5,076	6,961	5,365
Kanso	11	12	00	11	12	10								General.	2,862	6,982	4,854
Alamo	11	12	50	11	13	25								General.	2,150	10,687	6,633
Kanso	11	17	35	12	6	05								General.	4,810	11,070	7,971
Steel Trader	11	21	00	12	6	15								General.	4,178	6,363	4,336
Harry	12	6	05	12	7	25								General.	3,928	5,956	4,172
Lukenbach	11	21	25	12	7	45								General.	5,077	8,158	5,676
Hoyanger	11	21	25	12	7	45								General.			
Bradlyne	12	9	10	12	9	30								General.			
Zenon	11	45	12	11	10	00								General.			
Santa Barbara	12	17	15	12	20	53								General.			
Raranga	12	17	15	12	20	53								General.			
Kim	8	13	20	13	6	25								General.			
Canadian	12	20	15	13	7	20								General.			
Victor	12	23	10	13	8	20								General.			
Atago Maru	12	20	15	13	7	20								General.			

* Tanker.

† Motor ship.

‡ Submarine.

§ Supply ship.

*Tug.

Canadian Miller	13	19.40	13	20.35	14	9.20	14	10.23	British	Can. Nat. Steamships	400.0	52.0	17.0	Quebec, Canada	Victoria, B. C.	General	3,500	5,892	4,186
Ville de Verdun	13	6.35	14	6.15	14	9.20	14	15.50	French	Messageries Maritimes	411.0	53.0	23.7	Dunkirk, France	Noumea, New Cal	General	3,694	7,603	5,629
F. J.	13	22.05	14	6.25	14	15.00	14	16.12	American	Luckenbach Line	446.0	56.2	22.0	Mobile, Ala.	Tacoma, Wash.	General	4,144	8,508	6,179
President Adams	14	4.25	14	7.30	14	16.18	14	22.40	American	Dollar Line	592.0	62.0	29.0	New York, N. Y.	San Francisco, Cal	General	4,136	12,512	9,178
Pennsylvania	14	6.05	14	7.30	14	15.23	15	1.24	American	Panama-Pacific Line	530.4	80.3	26.0	New York, N. Y.	San Francisco, Cal	General	4,148	25,262	18,194
Lake Benbow	14	2.10	14	8.20	14	18.00	14	19.30	American	Ford Motor Co.	259.0	45.0	19.3	Chester, Pa.	San Francisco, Cal	General	2,317	2,676	1,797
El Cervo	14	7.30	14	9.00	14	17.12	14	18.35	British	Anglo-Ecuador Oil Co.	407.4	52.0	20.7	Philadelphia, Pa.	La Libertad, Peru	Ballast	6,046	4,326	
Dorset	14	7.40	14	9.45	14	18.48	14	20.05	British	Blue Star Line	499.8	64.0	19.7	Liverpool, England	Vancouver, B. C.	Ballast	11,673	8,143	
Ferglen	14	9.30	14	10.30	14	19.18	15	1.45	Norwegian	Fern Line	385.3	54.8	14.2	New York, N. Y.	Vancouver, B. C.	Ballast	6,615	4,859	
Amerikland	14	12.30	14	12.45	14	20.04	15	1.45	Swedish	Ore S. S. Corp.	561.0	72.0	22.3	Baltimore, Md	Cruz Grande, Chile	Ballast	15,560	4,496	
Caldas	8	19.55	14	12.20	14	20.36	15	11.37	Colombian	National Navigation Co.	116.0	21.0	10.3	Cristobal, C. Z.	Buenaventura, Col	General	167	211	124
Bomington Court	13	21.50	14	13.20	14	20.38	14	22.10	British	Haldin & Phillips	405.0	55.0	12.3	Antwerp, Belgium	Los Angeles, Calif	Ballast	7,042	5,208	
Ansgir	13	22.50	14	14.35	14	21.48	15	16.05	German	North German Lloyd	393.0	56.0	22.5	Bremen, Germany	Valparaiso, Chile	General	4,470	6,542	4,532
Solana	14	14.35	14	14.50	14	22.51	15	15.00	American	Tidewater Oil Co.	419.5	56.5	21.0	New York, N. Y.	San Francisco, Cal	Lubricating oil	1,600	7,060	5,025
Champerico	9	19.45	15	6.05	15	12.55	15	13.55	British	Pacific Steam Nav. Co.	290.0	41.7	17.0	Cristobal, C. Z.	Champerico, Guat	General	192	2,597	1,587
Keifu Maru	15	5.00	15	7.20	15	14.35	15	19.15	Japanese	S. Masuo	335.0	51.0	21.9	Baltimore, Md	Cotton, rosin	General	4,746	6,213	4,670
East Lynn	15	6.20	15	8.15	15	15.21	15	16.50	British	Sir W. R. Smith & Sons	401.1	54.3	25.0	Tampa, Florida	Osaka, Japan	General	7,512	6,784	5,107
Rhodops	15	6.20	15	11.45	15	18.33	15	19.59	German	Hamburg-American Line	435.5	53.2	26.3	Hamburg, Germany	San Antonio, Chile	General	3,854	7,525	5,154
San Simeon	15	9.55	15	12.30	15	19.41	15	21.00	American	Quaker Line	410.0	54.3	18.5	Philadelphia, Pa.	Seattle, Wash	General	2,733	6,573	4,916
Western Sun	15	12.05	15	13.40	15	20.44	15	22.35	American	Sun Oil Co.	480.6	66.0	27.0	Chester, Pa.	Los Angeles, Calif	Ballast	9,607	6,551	
Oregonian	15	18.00	15	19.40	16	11.22	16	12.45	American	Amer.-Hawaiian Line	494.0	52.0	19.0	Boston, Mass.	Portland, Oreg	General	2,972	6,754	4,800

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Caroline Maersk	9	5.00	9	6.42	9	17.20	9	17.20	Danish	Anglo-Saxon Pet. Co.	458.8	59.2	27.0	Los Angeles, Calif	Curacao, D. W. I.	Gasoline	11,220	8,102	5,695
Antinous	9	5.20	9	7.15	9	17.10	10	10.00	French	Messageries Maritimes	413.7	56.9	24.0	Noumea, New Cal	Dunkirk, France	Copra, general	2,910	7,643	5,364
Cobetas	9	6.20	9	8.17	9	18.05	9	18.45	Spanish	Cia. Nav. Vaseonpado	359.7	41.9	24.5	Tocopilla, Chile	Azores	Nitrate of soda	6,100	4,460	3,090
Rolling Stone	9	8.40	9	9.35	9	18.59	9	18.50	Panamanian	Robt. Wilcox	48.0	11.6		Balboa, C. Z.	Cristobal, C. Z.	Gas oil	27	20	
Broad Arrow	9	9.00	9	11.29	9	19.45	9	20.15	British	Standard Transp. Co.	467.6	62.7	27.0	Los Angeles, Calif	New York, N. Y.	General	11,672	9,700	6,804
Champerico	9	10.50	9	12.25	9	20.15	9	20.15	British	Pacific Steam Nav. Co.	290.0	41.7	15.0	Champerico, Guat	Cristobal, C. Z.	General	331	2,597	1,587
Mataro	9	4.45	9	9.13	9	19.25	9	20.55	British	Shaw, Savill & Albion	500.4	63.2	24.0	Tamaru, N. Z.	London, England	Frozen, general	4,300	13,590	9,233
Floreana	8	22.45	9	13.13	9	20.55	9	21.45	Colombian	F. Losato	150.0	27.2	7.3	Tumaco, Colombia	Riohacho, Colon	Ballast	5,625	410	307
Innaren	9	11.10	9	14.45	9	21.45	9	22.35	Swedish	Transatlantic Co.	330.0	50.0	22.3	Tocopilla, Chile	Azores	Nitrate of soda	5,625	4,822	3,272
Minden	9	1.09	9	15.24	9	22.30	9	22.30	German	North German Lloyd	380.7	51.0	13.0	Champerico, Guat	Bremen, Germany	Ballast	4,822	3,272	
Pacific	9	17.50	9	18.45	10	11.45	10	11.45	American	Dimon S. S. Corp.	409.7	54.2	24.0	Seattle, Wash	Norfolk, Va.	Lumber, general	7,917	6,630	4,916
Hemlock	9	18.20	10	7.00	10	13.50	10	13.50	American	The Texas Co.	418.5	56.1	26.0	Los Angeles, Calif	New York, N. Y.	Gasoline	8,237	6,775	4,841
New York	9	18.20	10	7.20	10	14.30	10	14.30	American	Creole Petroleum Co.	325.0	55.0	11.2	Balboa, C. Z.	Maracabo, Venez	Ballast	3,497	2,067	
Sciotia	10	7.38	10	14.35	10	22.40	10	22.40	American	U. S. Navy	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Towing barge	7,123	9,936	6,561
Orta	10	5.40	10	7.58	10	15.25	10	22.40	British	Pacific Steam Nav. Co.	485.0	58.0	29.0	Magallanes, Chile	Liverpool, England	General	15,860	11,573	7,711
Vancolie	10	7.10	10	10.22	10	19.50	11	20.40	British	Imperial Oil Co.	510.2	68.2	31.0	Leobits, Peru	Montreal, Canada	Crude oil	3,582	6,870	4,909
Viking Star	10	11.25	10	12.17	10	19.50	11	2.45	British	Blue Star Line	400.3	52.3	23.0	Salt Lake, Utah	Gothenburg, Swed	Frozen, general	3,831	3,983	2,629
Sigurd	10	16.35	10	17.17	11	10.50	11	10.50	American	Charles Nelson & Co.	324.0	46.6	24.0	San Francisco, Cal	New York, N. Y.	Lumber, general	8,600	8,201	6,207
Tiger	10	18.50	10	19.31	11	11.25	11	11.25	American	Standard Transp. Co.	410.0	56.0	28.0	Los Angeles, Calif	New York, N. Y.	Gas oil	8,600	8,201	6,207
California	10	12.05	11	6.09	11	13.00	11	14.00	American	Panama-Pacific Line	574.4	80.3	29.0	San Francisco, Cal	New York, N. Y.	General	6,950	24,506	17,565

* Motor ship.

† Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Operator.	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
R. J. Hanna	10	21	35	11	6	40	11	14	35	435	0	54	2	Gasoline	7,750	7,639	5,135
Arion	10	21	50	11	7	16	11	16	10	401	6	53	3	Raw sugar	7,379	6,314	4,637
Indiana City	11	7	30	11	8	36	11	17	11	417	7	54	2	General	7,400	6,512	4,665
Santa Inez	11	6	00	11	9	58	11	17	15	370	0	53	2	(*)	1,846	6,255	4,016
Taketoyo Maru	11	6	00	11	11	18	11	22	00	445	0	53	0	Tea, sugar, gen.	9,084	7,972	5,686
Mary D.	7	13	00	11	11	59	11	19	35	380	2	53	1	Lumber	5,673	5,516	3,943
Warrick	11	3	00	11	12	28	11	20	40	390	0	53	5	Wheat	7,733	6,612	4,119
Vancouver	11	12	45	11	12	33	11	22	00	375	0	52	5	Canned fish	7,000	6,099	4,491
Arizona	11	13	05	11	14	23	11	23	30	434	3	57	7	Portland	8,243	7,983	5,916
Wineote	11	16	00	11	16	43	12	11	30	346	0	49	5	Nitrate of soda	6,050		
Lilli	11	17	10	11	18	03	12	11	00	443	9	60	2	Lumber, general	6,500	9,294	6,865
Luckenbach	11	22	15	12	6	28	12	13	10	424	2	56	2	Lumber, general	7,100	7,611	5,497
Steel Worker	11	22	15	12	6	28	12	13	10	424	2	56	2				
Charles	11	17	10	12	6	43	12	14	30	409	7	54	2	Lumber	7,391	6,693	4,915
Christenson	11	23	45	12	7	18	12	15	05	427	3	53	3	Kerosene	7,532	6,218	4,248
Admiral	12	2	00	12	7	46	12	15	35	411	8	55	0	Wheat	8,800	6,952	5,005
Jersey City	12	2	00	12	7	46	12	15	35	411	8	55	0	General	7,622	6,720	4,744
Gottungen	12	10	00	12	8	30	12	16	30	400	5	54	5	Wheat	7,976	6,993	5,397
Klug City	12	13	50	12	10	34	12	17	30	378	0	54	2	Nitrates	7,588	6,235	4,486
Rosen	12	23	40	12	8	29	12	13	49	440	0	56	0	General	7,411	7,476	5,485
Canada	12	23	40	12	8	29	12	13	49	440	0	56	0	Gas oil	9,810	7,165	4,926
Acme	12	30	13	6	35	13	13	13	30	435	0	57	6	Lumber, general	7,565	7,157	4,836
Indiana	13	2	00	13	6	35	13	15	10	417	8	55	9				
Flouffe	13	4	30	13	8	14	13	15	40	401	8	52	2	General	4,301	6,002	4,621
Luckenbach	13	5	30	13	8	22	13	15	40	202	9	52	2	General	333	1,182	742
Barat	13	7	45	13	9	10	13	17	25	409	6	54	1	General	7,406	6,027	4,993
Abasco	13	10	45	13	11	29	13	20	50	409	6	54	1	Lumber, general	13,405	9,734	6,349
Thurston	13	10	45	13	11	29	13	20	50	480	6	68	0	Gasoline	6,348	6,476	4,682
San Clemente	13	10	45	13	11	29	13	20	50	410	0	54	4	Lumber, general	11,991	10,984	7,388
Japan Arrow	13	13	15	13	13	15	13	21	45	468	3	62	7	Gasoline	4,632	8,987	6,612
Patrick Henry	13	7	35	13	13	15	13	22	25	439	6	60	2	General	8,688	7,784	5,992
Florida	13	23	13	13	15	13	13	22	25	439	6	60	2	General	7,420	6,757	4,027
Oakland	13	23	13	13	15	13	13	22	25	439	6	60	2	General	11,174	7,614	4,563
Harbor	14	3	20	14	7	00	14	14	35	451	3	59	9	Gasoline	1,745	8,479	5,173
Elbro	14	3	20	14	8	39	14	17	40	450	3	58	8	General	7,300	4,536	2,692
King Edwin	14	2	50	14	8	02	14	18	50	400	0	54	8	Wheat	733	1,120	592
Cerro	14	8	40	14	10	02	14	19	06	227	2	64	13	General	733	1,120	592
San	14	8	40	14	10	02	14	19	06	480	6	66	0	Gasoline	13,519	9,002	5,472
Felix Tausaig	14	8	50	14	11	07	14	19	35	395	0	55	1	Lumber	7,200	5,856	3,362

* Motor ship.

* Tanker.

* Nitrates, coffee, and beans.

Ohioan	14 11 20	14 12 09	14 20 00	14 20 00	American.	Aner-Hawaiian Line	407 7	53 7 26 0	Tacoma, Wash.	Boston, Mass.	General	6,553	6,525	4,030
Appledore	14 14 05	14 14 48	14 21 40	14 21 40	British.	Empire Shipping Co.	406 3	56 0 27 0	Vancouver, B. C.	Liverpool, England	Wheat	8,901	5,218	3,150
Lochkarnie	14 14 54	14 16 33	14 23 45	15 10 10	British.	Royal Mail S. P. Co.	485 4	62 3 28 10	Vancouver, B. C.	Rotterdam, Holland	General	8,992	9,409	5,812
Ruahine	14 14 50	14 15 39	15 8 55	15 12 00	British.	N. Z. Shipping Co.	480 6	60 3 24 0	Pt. Chalmers, N. Z.	London, England	Frozen, general	3,667	10,869	6,872
Texas	14 21 50	15 5 38	15 13 15	15 13 15	American.	The Texas Co.	416 8	56 1 23 8	Los Angeles, Calif.	Pt. Arthur, Tex.	Natural gasoline	7,583	6,377	3,952
Loreto	14 20 15	15 6 46	15 14 55	15 14 55	British.	Pacific Steam Nav. Co.	406 2	54 2 26 0	Magallanes, Chile.	Hull, England	General	7,470	6,725	4,105
Fisher	13 14 30	15 6 48	15 14 50	15 14 50	British.	P. G. Gerry	41 0	18 5 7 0	Vancouver, B. C.	Belize, Honduras	Ballast	.....	70	47
Laestie I	15 11 05	15 7 08	15 18 50	15 18 50	Panamaian	Panamaian Gov't.	385 6	54 2 25 0	Balboa, C. Z.	Gatun Lake, C. Z.	Lumber	7,111	6,736	5,064
Almudrite	15 12 30	15 11 43	15 18 50	15 18 50	Danish.	Stramø & Co.	107 0	22 9 10 0	Englewood, Md.	Baltimore, Md.	Coffee	145	238	163
Cauca	15 16 10	15 13 35	15 21 15	16 13 05	Colombian.	National Navigation Co.	395 5	54 0 25 0	Buenaventura, Col.	Cristobal, C. Z.	Wheat	8,250	6,042	4,247
Badjestan	15 19 15	15 20 00	16 12 20	16 12 20	British.	Common Brothers	409 6	54 0 26 0	Vancouver, B. C.	Hull, England	Wheat	8,020	5,756	4,139
Amberton	15 19 15	15 20 00	16 12 20	16 12 20	British.	R. Chapman & Son	409 6	54 0 26 0	Vancouver, B. C.	Rotterdam, Holland	Wheat	8,020	5,756	4,139

* Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 9	Costarica	Royal Netherlands S. S. Co.	Hamburg via wayp'ts.	November 9	No. 9685 ¹⁵	Pan American Airways	San Salvador and wayp'ts.
November 9	Guadeloupe	French Line	St. Nazaire via wayp'ts.	November 9	No. 300-N ¹⁵	Pan American-Grace Airways	Talara via wayports.
November 9	Toluca	United Fruit Co.	Port Limon, Costa Rica.	November 9	No. 9776 ¹⁵	Pan American Airways	Miami via wayports.
November 9	Daiver ¹²	U. S. Navy	Tela, Honduras.	November 9	Camden	United Fruit Co.	Port Limon and Curaçao.
November 10	Dora K. ¹³	A. L. Surgeon	Colon, Rep. of Panama.	November 9	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
November 10	August Thyssen	Aluminum Line	Tampa, Fla.	November 9	Ancon	United Fruit Co.	New York via Kingston.
November 10	N. R. 101-W ¹⁴	Pure Oil Co.	New York, N. Y.	November 9	Toluca	Panama R. R. S. S. Line	New York via Haiti.
November 10	Darien C-35 ¹⁵	Scandia Airplane Co.	Barranquilla and wayp'ts.	November 10	Dora K. ¹³	A. L. Surgeon	Bluefields and Ft. Limon.
November 10	Pastores	United Fruit Co.	New York via Habana.	November 10	August Thyssen	Aluminum Line	Maracaibo, Venezuela.
November 10	No. 9588 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	November 10	Guadeloupe	French Line	Havre via wayports.
November 11	Escoppe Fuego ¹⁶	Comolly & Papi	Bluefields, Nicaragua.	November 12	No. 9670 ¹⁵	Pan American Airways	San Salvador and wayp'ts.
November 11	No. 300-N ¹⁵	Pan American-Grace Airways	Talara via wayports.	November 12	No. 142-M ¹⁵	Pan American Airways	Miami via wayports.
November 12	Metapan	United Fruit Co.	New York via Kingston.	November 12	Pastores	United Fruit Co.	Port Limon, Costa Rica.
November 12	No. 9685 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	November 12	No. 300-N ¹⁵	Pan American Airways	Curaçao and wayports.
November 12	No. 9776 ¹⁵	Pan American Airways	Miami via wayports.	November 13	Metapan	United Fruit Co.	New York via wayports.
November 13	Irona	United Fruit Co.	New Orleans, La.	November 13	Irona	United Fruit Co.	Port Limon, Costa Rica.
November 13	Bridgeport	Colombian S. S. Line	New York via wayp'ts.	November 13	Escoppe Fuego ¹⁶	Comolly & Papi	Bluefields, Nicaragua.
November 13	No. 145-M ¹⁵	Pan American Airways	Miami via wayports.	November 13	Bridgeport	Colombian S. S. Line	New York via Kingston.
November 13	U. S. Ashville ¹²	U. S. Navy	Bluefields, Nicaragua.	November 14	No. 9688 ¹⁵	Pan American Airways	San Salvador and wayp'ts.
November 14	Dorelan	Leyland S. S. Line	Port Limon, Costa Rica.	November 14	Darien C-35 ¹⁵	Scandia Airplane Co.	Barranquilla and wayp'ts.
November 14	Anapala	Standard Fruit & S. S. Co.	New Orleans and Habana.	November 15	Inapachuma ¹⁷	United Fruit Co.	Colon, Rep. of Panama.
November 15	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	November 15	La Esfera ¹⁶	A. Tagaropoulos	Colon, Rep. of Panama.
November 15	Sparrholm	Aluminum Line	Houston via New Orleans.	November 15	Dorelan	Diez & Garcia	Colon, Rep. of Panama.
November 15	Irona	United Fruit Co.	Port Limon, Costa Rica.	November 15	La Esfera ¹⁶	Alfred Howell	Port Limon, Costa Rica.
November 15	Teutonia	Hamburg-American Line	Tampico via wayports.	November 15	Amapala	Leyland S. S. Line	Cartagena, Colombia.
November 15	No. 309-N ¹⁵	Pan American Airways	La Guayra via wayports.	November 15	Sparrholm	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
November 15	No. 9137 ¹⁵	Pan American Airways	Miami via wayports.	November 15	Teutonia	Aluminum Line	Cartagena, Colombia.
November 15	No. 9670 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	November 15	Teutonia	Hamburg-American Line	Cartagena, Colombia.

* * * Cruiser.

* * * Air mail carrier.

* * * Motor schooner.

* * * Motor boat.

* * * Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.							
* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 15.	No. 945-N ¹⁸ .	Pan American-Grace Airways.	Talara via wayports.	November 15.	Irona	United Fruit Co.	New Orleans and waypts.
November 15.	Anchicuma ¹⁹ .	United Fruit Co.	Colon, Rep. of Panama.				
November 15.	Inapaguina ¹⁹ .	A. Tagaropoulos	Colon, Rep. of Panama.				
November 15.	Nueva Espana ¹⁹ .	Diez & Garcia.	Colon, Rep. of Panama.				
November 15.	La Esfera ²⁰ .	Alfred Howell.	Colon, Rep. of Panama.				
18 Air mail carrier. 19 Motor boat. 20 Motor schooner.							
PORT OF BALBOA.							
November 11.	Heiyo Maru ²¹ .	Nippon Yusen Kaisha	Hongkong, China.	November 11.	Heiyo Maru ²¹ .	Nippon Yusen Kaisha	Valparaiso, Chile
November 13.	City of San Francisco ²¹ .	Panama Mail S. S. Co.	San Francisco, Calif.	November 14.	City of San Francisco ²¹ .	Panama Mail S. S. Co.	Buenaventura, Colombia.
November 14.	San Jose.	United Fruit Co.	San Francisco, Calif.	November 15.	San Jose.	United Fruit Co.	San Francisco, Calif.
November 14.	Liberator ²⁰ .	A. Valdez.	Panama Bay, R. P.	November 14.	Liberator ²⁰ .	A. Valdez.	Panama Bay, R. P.
November 14.	Dos Hermanos ²⁰ .	Panama Bay, R. P.	Panama Bay, R. P.	November 14.	Dos Hermanos ²⁰ .	A. Valdez.	Panama Bay, R. P.
November 14.	Sambu ²⁰ .	Haus Elliot.	Panama Bay, R. P.	November 14.	Sambu ²⁰ .	Haus Elliot.	Panama Bay, R. P.
November 14.	El Sona ²⁰ .	Haus Elliot.	Panama Bay, R. P.	November 14.	El Sona ²⁰ .	Haus Elliot.	Panama Bay, R. P.
November 14.	Real ²⁰ .	Haus Elliot.	Panama Bay, R. P.	November 15.	Real ²⁰ .	Haus Elliot.	Panama Bay, R. P.

²¹ Motor ship.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in October, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of October, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for October, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	72	411,599	310,114	501,508	309,719	\$350,077.84	177,509
Europe to west coast Canada:							
British.....	26	138,723	99,623	159,640	97,977	102,962.11	8,953
Danish.....	2	11,004	9,445	13,563	9,465	9,398.61	2,899
Dutch.....	1	8,351	6,201	10,155	6,337	7,751.25	3,549
French.....	3	19,808	11,807	21,682	12,572	14,758.75	3,763
German.....	4	26,584	17,628	29,490	17,981	21,461.10	10,571
Italian.....	2	12,107	10,451	13,603	8,660	10,005.25	2,184
Norwegian.....	3	16,633	12,803	20,467	12,817	16,003.75	14,320
Swedish.....	1	4,919	2,890	4,960	3,665	3,612.50	4,120
Total.....	42	238,129	170,848	273,560	169,474	185,953.32	50,359
East coast of United States to west coast of South America:							
British.....	6	26,575	21,841	38,136	22,263	20,912.88	4,227
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,581
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	2,750
Swedish.....	1	4,496	3,743	15,337	4,385	3,237.12	
United States.....	11	48,286	35,713	65,253	35,613	40,455.25	19,028
Total.....	20	88,598	67,439	130,508	68,969	72,282.75	27,586
East coast of United States to Far East:							
British.....	6	34,721	21,009	35,520	21,086	26,261.25	35,871
Japanese.....	7	36,725	31,027	46,511	30,685	38,627.65	42,752
Norwegian.....	3	13,207	7,442	12,934	7,468	9,302.50	12,360
United States.....	4	23,041	16,342	24,837	15,327	20,427.50	29,776
Total.....	20	107,694	75,820	119,802	74,566	94,618.90	120,759
Europe to west coast of South America:							
British.....	4	25,454	19,791	33,296	20,488	23,011.39	11,586
Chilean.....	1	3,528	2,153	4,170	2,441	2,691.25	487
Danzig.....	1	6,310	5,346	8,940	5,050	4,543.20	
Dutch.....	3	18,763	10,551	18,031	10,901	13,188.75	7,342
French.....	1	4,301	3,683	5,791	3,589	4,603.75	7,682
German.....	4	20,323	15,845	25,213	15,396	19,806.25	15,091
Greek.....	1	3,429	2,231	3,536	2,223	2,468.88	
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,358
Norwegian.....	1	3,965	2,637	4,436	2,664	3,296.25	6,703
Spanish.....	3	8,272	6,993	10,739	6,671	6,880.36	4,900
Total.....	20	101,861	74,744	126,155	75,481	87,382.58	55,149
Europe to west coast of United States:							
British.....	7	37,407	28,512	47,148	28,531	26,638.98	
Danish.....	1	4,418	3,585	5,702	3,583	3,180.96	
Italian.....	1	4,421	3,764	6,107	3,883	3,183.12	
Norwegian.....	3	16,604	13,913	22,930	13,736	11,954.88	
United States.....	3	21,373	17,093	27,473	16,920	15,388.56	
Total.....	15	84,223	66,867	109,360	66,653	60,346.50	
Cristobal to west coast of South America:							
Colombian.....	4	574	554	880	550	673.70	596
Dutch.....	2	1,484	588	1,560	646	735.00	119
German.....	4	3,491	2,260	4,347	2,334	2,825.00	705
Total.....	10	5,549	3,402	6,787	3,530	4,233.70	1,414

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to west coast of Canada:							
British.....	3	13,463	9,151	14,778	9,195	\$10,671.12	7,219
Norwegian.....	2	9,331	6,537	9,077	5,461	6,561.56	.....
United States.....	4	18,301	12,398	20,217	12,360	15,497.50	22,055
Total.....	9	41,095	28,086	44,072	27,016	32,730.18	29,274
East coast of United States to Australia:							
British.....	5	30,355	19,851	31,940	19,910	24,813.75	11,982
Norwegian.....	2	7,205	4,464	7,597	4,495	5,580.00	11,750
United States.....	1	5,241	3,763	5,881	3,664	4,703.75	1,500
Total.....	8	42,801	28,078	45,418	28,069	35,097.50	25,232
Europe to Australasia:							
British.....	6	49,758	35,110	60,715	36,740	43,887.50	39,259
French.....	1	5,472	4,777	6,037	3,747	5,971.25	2,955
Total.....	7	55,230	39,887	66,752	40,487	49,858.75	42,214
East coast of United States to Philippine Islands:							
British.....	2	11,311	7,096	12,587	7,281	8,870.00	10,320
Danish.....	1	2,180	1,724	2,925	1,748	2,155.00	2,900
Norwegian.....	1	7,063	4,017	6,744	4,109	5,021.25	2,881
United States.....	1	6,525	4,832	7,621	4,832	6,040.00	7,557
Total.....	5	27,079	17,669	29,877	17,970	22,086.25	23,658
Canadian intercoastal:							
British.....	3	12,398	9,719	16,100	9,984	10,056.94	2,200
United States.....	1	4,284	3,071	5,031	3,106	3,838.75	4,500
Total.....	4	16,682	12,790	21,131	13,090	13,895.69	6,700
Foreign vessels in Ballast— United States inter- coastal:							
British.....	1	6,386	5,524	8,780	5,145	4,597.92	.....
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	.....
French.....	1	5,072	4,392	6,795	4,494	3,651.84	.....
Norwegian.....	1	5,531	4,682	7,614	4,563	3,982.32	.....
Total.....	4	22,053	17,348	27,921	16,667	15,669.58	.....
Cristobal to west coast of United States:							
United States.....	3	7,103	5,408	8,972	5,299	4,928.75	1,335
East coast of South America to west coast of Canada:							
Norwegian.....	1	5,131	2,906	4,884	3,004	2,632.50	6,054
United States.....	2	10,060	7,095	11,130	7,074	8,868.75	13,574
Total.....	3	15,191	10,001	16,014	10,078	12,501.25	19,628
Around the world:							
United States.....	3	26,956	18,766	31,531	18,733	23,457.50	11,099
East coast of Canada to Aus- tralia:							
British.....	2	9,633	7,657	12,626	7,749	9,571.25	8,011
West Indies to west coast of Central America:							
British.....	2	1,381	1,288	2,019	1,241	1,013.02	20
South American intercoastal:							
British.....	1	806	424	944	482	530.00	138
Colombian.....	1	307	302	405	308	368.40	625
Total.....	2	1,113	726	1,349	790	898.40	763
Cristobal to west coast of United States:							
British.....	2	2,293	1,920	3,703	2,065	2,400.00	1,667
East coast of United States to Hawaii:							
United States.....	1	1,646	1,614	1,748	1,624	1,975.20	2,396
East coast of Canada to west coast of South Amer- ica:							
British.....	1	7,648	6,391	11,410	5,688	5,506.56	.....

ATLANTIC TO PACIFIC.—Continued.

Nationality.	Tons of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Central America to west coast of South America:							
British.....	1	3,892	3,363	5,582	3,370	\$4,203.75	7,603
East coast of Central America to Australasia:							
British.....	1	4,852	2,927	4,815	2,948	3,658.75	6,501
Central American intercoastal:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	1,769
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,128
West Indies to west coast of United States:							
Norwegian.....	1	5,132	4,382	7,356	4,367	3,695.04	.....
West Indies to west coast of Canada:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	4,154
West Indies to west coast of South America:							
United States.....	1	7,363	7,178	9,621	7,171	8,835.60	13,392
West Indies to Far East:							
British.....	1	4,497	4,499	4,698	2,844	5,396.40	7,100
Europe to west coast of Central America:							
German.....	1	3,272	2,565	4,165	2,547	3,206.25	1,433
Cristobal to Balboa:							
Panamanian.....	1	20	15	20	16	14.40	.....
Grand total, October, 1930...	265	1,354,693	998,506	1,640,251	995,155	1,123,888.16	649,853
Grand total, October, 1929...	277	1,394,206	1,049,506	1,728,277	1,050,939	1,195,727.56	848,347
Grand total, October, 1928...	306	1,381,688	1,050,917	1,718,872	1,048,282	1,190,585.26	875,641

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	78	424,183	323,873	522,545	322,950	\$404,721.55	607,898
West coast of Canada to Europe:							
Belgian.....	1	7,044	4,567	7,217	4,398	5,708.75	10,450
British.....	12	64,763	47,089	76,100	47,511	58,861.25	95,145
Danish.....	2	13,393	9,908	16,755	10,414	12,385.00	16,748
Dutch.....	2	13,611	10,636	17,050	10,610	13,295.00	17,308
French.....	2	12,252	7,428	13,629	7,816	9,285.00	12,710
German.....	3	17,346	14,245	24,047	14,686	17,806.25	26,447
Italian.....	1	5,981	4,365	7,098	4,498	5,456.25	8,584
Japanese.....	5	23,761	22,231	28,891	20,059	27,788.75	38,351
Norwegian.....	3	16,122	10,870	18,014	11,098	13,587.50	23,660
Swedish.....	2	9,328	5,459	9,545	6,872	6,823.75	12,835
United States.....	4	22,145	17,192	26,072	17,216	21,256.95	33,788
Total.....	37	209,746	153,990	244,418	155,178	192,254.45	296,026
West coast of South America to east coast of United States:							
British.....	8	36,981	30,990	53,768	32,571	38,737.50	58,556
Chilean.....	2	9,377	6,899	14,620	7,952	8,623.75	6,760
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	7,950
Peruvian.....	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	13	58,621	45,869	83,653	45,817	57,070.85	135,614
Total.....	27	121,998	97,488	192,033	100,976	121,459.90	256,733
West coast of South America to Europe:							
British.....	9	43,797	33,659	54,812	34,010	42,073.75	57,989
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,330
Dutch.....	2	9,640	5,431	9,243	5,650	6,788.75	13,345
French.....	2	10,417	7,506	12,262	7,512	9,382.50	18,142
German.....	5	26,483	20,104	32,457	19,804	25,130.00	39,847
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	6,194
Norwegian.....	3	15,000	11,124	18,598	11,162	13,905.00	21,339
Yugoslav.....	2	10,210	7,406	12,038	7,390	9,257.50	18,470
Total.....	26	140,376	100,897	171,736	104,064	126,121.25	186,656

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Europe:							
British.....	8	38,810	30,094	48,902	30,831	\$37,617.50	65,046
Danzig.....	1	6,338	5,236	8,956	5,041	6,545.00	10,907
French.....	2	10,140	8,769	13,806	8,084	10,961.25	17,672
German.....	2	7,402	5,630	9,403	5,443	7,037.50	12,061
Japanese.....	3	12,917	11,943	16,876	12,172	14,595.00	22,711
Norwegian.....	2	11,115	9,350	15,407	9,184	11,687.50	20,792
United States.....	1	5,239	3,842	6,157	3,801	4,802.50	7,642
Total.....	19	91,961	74,864	119,507	74,556	93,246.25	156,831
West coast of South America to Cristobal:							
Colombian.....	4	574	554	880	550	682.10	750
Dutch.....	2	1,484	588	1,560	646	735.00	834
German.....	4	3,148	2,361	4,217	2,894	2,951.25	3,059
Total.....	10	5,206	3,503	6,657	3,990	4,368.35	4,643
West coast of United States to West Indies:							
British.....	2	(¹)	(¹)	(¹)	(¹)	5,340.00	.....
Norwegian.....	2	8,601	7,259	11,582	7,008	6,192.72	.....
United States.....	1	6,050	5,140	8,207	5,092	4,356.00	.....
Total.....	5	14,651	12,399	19,789	12,100	15,888.72	.....
Philippine Islands to east coast of United States:							
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,035
Japanese.....	2	10,313	8,416	13,523	8,271	10,520.00	6,014
United States.....	2	9,085	7,675	11,320	8,595	9,476.85	10,534
Total.....	5	24,898	19,172	29,881	20,021	23,848.10	23,583
Far East to Europe:							
British.....	2	8,855	7,383	11,914	7,396	9,228.75	13,859
Japanese.....	3	14,190	13,794	18,531	13,402	16,826.05	17,361
Total.....	5	23,045	21,177	30,445	20,798	26,054.80	31,220
Australasia to Europe:							
British.....	5	43,296	30,449	50,908	31,482	38,061.25	29,461
West coast of United States to Cristobal:							
United States.....	4	9,432	7,298	12,175	7,182	9,122.50	2,368
West coast of Central America to Cristobal:							
British.....	4	3,734	3,206	6,001	3,369	4,007.50	876
Canadian intercoastal:							
British.....	3	12,301	9,431	15,711	9,788	11,788.75	17,129
West coast of Canada to east coast United States:							
Norwegian.....	1	5,058	2,788	4,663	2,793	3,485.00	7,019
United States.....	2	9,704	6,873	10,773	6,873	8,591.25	13,226
Total.....	3	14,762	9,661	15,436	9,666	12,076.25	20,245
Hawaii to east coast of United States:							
United States.....	2	6,754	5,348	8,635	5,279	6,685.00	11,804
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,246	2,949	4,883	2,999	3,686.25	3,692
United States.....	1	5,030	3,514	5,515	3,511	4,392.50	6,452
Total.....	2	10,276	6,463	10,398	6,510	8,078.75	10,144
West coast of South America to east coast of Canada:							
British.....	2	14,420	12,366	22,719	11,469	15,457.50	31,293
West coast of South America to West Indies:							
British.....	2	3,892	3,363	5,582	3,370	5,477.24	.....
Far East to West Indies:							
Japanese.....	1	4,959	3,939	5,784	3,608	4,923.75	7,767
Norwegian.....	1	4,681	2,496	4,400	2,527	3,120.00	7,300
Total.....	2	9,640	6,435	10,184	6,135	8,043.75	15,067

* Naval vessels having a total of 10,680 displacement tons.

* Includes naval vessel of 5,350 displacement tons.

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to east coast of Canada:							
British.....	2	8,591	6,557	10,866	6,673	\$8,196.25	4,851
West coast of United States to east coast of Central America:							
British.....	1	5,423	4,733	7,270	4,513	3,904.56	.....
West coast of United States to east coast of South America:							
British.....	1	4,492	3,574	5,595	3,528	4,467.50	2,608
West coast of Central America to east coast United States:							
British.....	1	1,341	1,250	1,935	1,183	1,562.50	2,450
West coast of Central America to Europe:							
German.....	1	2,356	1,468	2,446	1,434	1,835.00	3,222
South American intercoastal:							
British.....	1	806	424	944	482	530.00	.....
West coast of South America to Egypt:							
Belgian.....	1	6,211	4,522	7,130	4,013	5,652.50	9,700
Hawaii to Europe:							
Belgian.....	1	3,988	3,155	5,172	3,078	3,943.75	6,700
Far East to east coast of United States:							
Norwegian.....	1	6,829	3,973	6,687	4,085	4,966.25	5,737
Australasia to east coast of United States:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	7,312
Grand total, October, 1930....	252	1,229,467	933,658	1,547,249	940,141	1,165,093.92	1,744,557
Grand total, October, 1929....	287	1,353,743	1,029,194	1,690,057	1,032,129	1,290,170.15	1,997,296
Grand total, October, 1928....	251	1,133,692	867,994	1,436,367	874,503	1,084,360.04	1,706,836

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 13, 1930.

No. 798.

PANAMA, WEST COAST, LIGHTS ESTABLISHED.

1. *Morro Puercos Light*. Because of errors in projection on H. O. Charts 1018 and 1019, the new Morro Puercos Light (See Notice to Mariners No. 791, November 4, 1930) plots off the land; it correctly plots on H. O. Chart No. 5447 however. When using charts 1018 and 1019, use the following position for the light: Latitude $7^{\circ} 13' 55''$ N., longitude $80^{\circ} 26' 15''$ W.

Ships are cautioned to keep off the light from 4 to 5 miles to avoid foul ground. Tower is painted white, day marks on two sides; correction to N. M. No. 791, which should be noted accordingly.

2. *Jicarita Island Light*. A new light is now under construction on the southwest portion of the island and will be in operation about November 21st. *Characteristics*: Flashing white; two distinct flashes of 1.5 seconds duration every 15 seconds. Visibility 20 miles. *Description*: Pyramidal lattice work steel tower, 50 feet high, painted white, day marks on two sides. Height of focal plane about 350 feet above mean high water.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 14, 1930.

No. 799.

Panama, west coast, South Frailes Island Light, characteristics changed. South Frailes Island Light was changed from flashing white to flashing red on November 14, 1930.

Position: Latitude $7^{\circ} 19' 45''$ N., longitude $80^{\circ} 7' 55''$ W. *Characteristics*: Flashing red; period 4 seconds; light 0.5 second, eclipse 3.5 seconds; 15 flashes per minute.

Description: The lighthouse is located on the small island, about 100 feet N. W. of the main island, and consists of a 375 m. m. acetylene gas lantern mounted on a 13-foot steel tower, tower set on a $7\frac{1}{2}$ -foot concrete pedestal. Tower and pedestal painted white. Height: 59 feet above mean high water. *Visibility*: 15 nautical miles.

H. BURGESS,
Governor.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective November 17, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., November 26, 1930. No. 17.

CANAL WORK IN OCTOBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of October, 1930.

BALBOA HEIGHTS, C. Z., November 18, 1930.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of October, 1930:

NUMBER OF TRANSITS.

During the month 517 commercial vessels and 7 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 39 vessels belonging to the United States Government, 2 transits of a Panamanian Government vessel, and one transit of a vessel solely for repairs, on which no tolls were collected, making a total of 566 transits for the month, or a daily average of 18.26.

Tolls on the commercial vessels amounted to \$2,288,982.08, and on the launches to \$28.50, a total of \$2,289,010.58, or a daily average on all traffic of \$73,839.05.

Commercial traffic for the past month was the second highest in the current calendar year both in number of transits and the amount of tolls collected, having been exceeded only by the traffic passing through in January (531 transits and \$2,360,211.24 in tolls). The increase in tonnage was due to the additional tonnage placed in service to take care of the seasonal increase in shipments, particularly food products. As compared with the traffic passing through in October, 1929, that for October, 1930, shows approximately an 8 per cent decrease. In comparison with the first ten months in 1929, traffic for the corresponding period this year has fallen off to the extent of 472 transits and \$1,183,705.27 in tolls, decreases of 8.8 per cent and 5.1 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of October in the two preceding years, and in 1930, are shown in the following tabulation:

	October, 1928.	October, 1929.	October, 1930.
Commercial vessels.....	557	564	517
Launches (under 20 tons).....	10	8	7
Noncommercial vessels:			
United States Government.....	30	42	39
Panamanian Government.....	1	1	2
For repairs.....	4	1	1
Total.....	602	616	566

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, launches, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	3	3	6
Pedro Miguel.....	16	14	30
Miraflores.....	11	12	23
Total.....	30	29	59

COMMERCIAL TRAFFIC.*

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of October in 1929, and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,360,253	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March...	536	515	2,567,961	2,505,859	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April...	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.57	2,232,763.00
May...	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June...	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July...	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August...	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September...	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October...	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
Total...	5,383	4,911	25,305,512	24,415,760	26,390,928	23,417,857	23,038,789.02	21,855,083.75

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for October in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	October, 1928.	October, 1929.	October, 1930.	Average per month for fiscal year 1930.
Number of vessels.....	557	564	517	515
Panama Canal net tonnage.....	2,515,380	2,747,949	2,584,160	2,498,385
United States net tonnage.....	1,918,911	2,078,700	1,932,164	1,890,255
Registered gross tonnage.....	3,155,239	3,418,334	3,187,500	3,119,221
Registered net tonnage.....	1,922,785	2,083,068	1,935,296	1,899,802
Tolls.....	\$2,274,945.30	\$2,485,897.71	\$2,288,982.08	\$2,256,407.50
Tons of cargo carried.....	2,582,477	2,845,643	2,394,410	2,502,519

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year, 1930.
	October, 1928.	October, 1929.	October, 1930.	
Number of transits.....	17.97	18.19	16.68	16.95
Panama Canal net tonnage.....	81,141	88,644	83,360	82,139
Tolls.....	\$73,385.33	\$80,190.25	\$73,838.13	\$74,183.26
Tons of cargo carried.....	83,305	91,795	77,239	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of October in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	October, 1928.	October, 1929.	October, 1930.
Panama Canal net tonnage.....	4,516	4,872	4,998
United States net tonnage.....	3,445	3,686	3,737
Registered gross tonnage.....	5,665	6,061	6,165
Registered net tonnage.....	3,452	3,693	3,743
Tolls.....	\$4,084.28	\$4,407.62	\$4,427.43
Tons of cargo (including vessels in ballast).....	4,636	5,045	4,631
Tons of cargo (laden vessels only).....	5,688	5,941	5,742

NATIONALITY OF VESSELS.

Nineteen nationalities were represented in the commercial traffic passing through the Canal in October, 1930. Vessels of United States registry, with 215, led in the number of transits, while those flying the British flag, with 144, were second. Vessels

of these two nationalities made up 69 per cent of the total transits for the month. Norway and Germany were next with 34 and 28, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of October, 1930, was 2,394,410 tons. Cargo from the Atlantic to the Pacific aggregated 649,853 tons, as compared with 595,589 tons in September, 1930, and 848,347 tons in October, 1929. From the Pacific to the Atlantic there were 1,744,557 tons, as compared with 1,463,993 tons in September, 1930, and 1,997,296 tons in October, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 169,693 tons, constituted the heaviest item of cargo, followed by mineral oils with 54,924 tons, cotton with 39,846 tons, and sulphur with 30,573 tons. There was a decrease of 198,494 tons of cargo, or 23.4 per cent, in this direction as compared with October, 1929, due to lessened shipments of many of the important commodities.

From the Pacific to the Atlantic mineral oil shipments totaling 455,268 tons constituted the heaviest item, followed by lumber with 238,501 tons, ores (principally iron) with 174,267 tons, wheat with 169,165 tons, miscellaneous canned goods with 145,341 tons, and nitrates with 138,681 tons. There was a decrease of 252,739 tons, or 12.7 per cent, in this direction as compared with October, 1929. Mineral oil shipments declined 150,097 tons, or 24.8 per cent; nitrates, 135,902 tons, or 49.5 per cent; and lumber, 83,669 tons, or 26 per cent. Wheat and miscellaneous canned goods increased, respectively 45,060 tons, or 36.3 per cent, and 42,443 tons, or 41.2 per cent, in comparison with the corresponding month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.921 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.718 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of October, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$15,305.00	\$17,243.00	\$1,938.00	
British.....	* 621,824.12	* 642,357.40	20,533.28	
Chilean.....	15,606.25	17,577.00	1,970.75	
Colombian.....	1,724.20	1,455.00		\$269.20
Danish.....	41,212.07	44,628.00	3,415.93	
Danzig.....	17,673.20	16,251.00		1,422.20
Dutch.....	42,493.75	53,333.00	10,839.25	
French.....	58,614.34	65,433.20	6,818.86	
German.....	102,058.60	112,103.00	10,044.40	
Greek.....	2,468.88	2,057.43		411.45
Italian.....	38,535.87	44,519.80	5,983.93	
Japanese.....	118,493.70	108,686.00		9,807.70
Norwegian.....	134,565.27	151,313.40	16,748.13	
Panamanian.....	14.40	12.00		2.40
Peruvian.....	4,252.80	3,544.00		708.80
Spanish.....	6,800.36	6,196.80		683.56
Swedish.....	23,030.87	25,861.60	2,830.73	
United States.....	1,034,970.90	1,074,091.40	39,120.50	
Yugoslav.....	9,257.50	10,210.00	952.50	
Total.....	2,288,982.08	2,396,873.00	121,196.26	13,305.34
Net increase for all traffic.....			107,890.92	

* Includes \$8,015 collected for naval vessels at \$0.50 per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$23,282.61
United States foreign trade.....	15,154.14
United States—Canal Zone trade.....	683.75
Total.....	39,120.50

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in October, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	.....	1.56	1.56
British.....	.72	1.35	1.06
Chilean.....	.25	.72	.50
Colombian.....	1.33	1.31	1.35
Danish.....	.71	1.35	1.13
Danzig.....	.....	1.78	1.78
Dutch.....	.38	1.27	.80
French.....	.49	1.48	1.01
German.....	.58	1.39	1.03
Italian.....	.26	.60	.48
Japanese.....	1.08	1.39	1.27
Norwegian.....	1.01	1.41	1.23
Peruvian.....	.....	1.14	1.14
Spanish.....	1.59	.....	1.59
Swedish.....	.84	3.10	2.62
United States.....	.74	1.51	1.18
Yugoslav.....	.....	1.81	1.81
Averages, October, 1930.....	.73	1.45	1.14
Averages, October, 1929.....	.87	1.48	1.23
Averages, October, 1928.....	.92	1.51	1.24

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of October is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	15,539	\$16,878.10	45	259,084	\$264,968.40
Ballast.....	41	236,554	170,385.03	4	19,859	14,298.48
General cargo ships:						
Laden.....	171	875,671	774,188.85	198	945,611	874,325.00
Ballast.....	48	226,686	162,258.28	2	4,913	3,487.04
Noncargo-carrying ships:						
Naval.....	.....	.....	.....	3	.....	8,015.00
Yachts.....	2	243	177.90	.....	.....	.....
Total.....	265	1,354,693	1,123,888.16	252	1,229,467	1,165,093.92
Method of propulsion:						
Steam.....	187	960,182	811,682.82	193	899,796	\$64,638.62
Motor.....	76	392,558	309,861.74	59	329,671	300,455.30
Motor schooner.....	1	307	368.40	.....	.....	.....
Sail.....	1	1,646	1,975.20	.....	.....	.....
Total.....	265	1,354,693	1,123,888.16	252	1,229,467	1,165,093.92

Of the 380 steam-driven vessels, 265 were oil burning, 105 coal burning, and 10 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of October, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	1	3 4,405	\$5,506.25	1	3 4,405	\$5,506.25
Battleships.....	1	3 27,000	13,500.00	1	3 27,000	13,500.00
Cargo ships.....	2	3 6,849	8,561.25	2	3 6,849	8,561.25
Cruisers.....	1	3 2,200	1,600.00	1	3 2,200	1,600.00
Launches.....	3	3 15	10.80	3	3 15	10.80
Minesweepers.....	2	3 1,900	950.00	2	3 1,900	950.00
Submarines.....	8	3 6,986	3,493.00	5	3 4,358	2,179.00
Survey ships.....	1	3 2,600	1,300.00	1	3 2,600	1,300.00
Tankers.....	1	3 5,181	3,885.75	1	3 5,181	3,885.75
Transports.....	1	3 3,908	4,885.00	1	3 3,908	4,885.00
U. S. Army vessels:						
Transports.....	3	3 11,724	14,655.00	2	3 6,943	8,678.75
Tugs.....	2	3 92	69.00	2	3 92	69.00
Total, U. S. Government.....	20		29,490.40	19		51,115.00
Panamanian Government vessels:						
Transports.....	1	3 101	72.72	1	3 101	72.72
Vessels for repairs:						
Tankers.....	1	3 1,645	1,233.75	1	3 1,645	1,233.75
Grand total.....	21		29,563.12	21		52,421.47

* Indicates displacement tonnage. * Indicates Panama Canal net tonnage. * Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of October, 1930, carried cargo as follows: Atlantic to Pacific, 1,374 tons; Pacific to Atlantic, 14,440 tons; total 15,814 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of October, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	4	10	\$7.50
Pacific to Atlantic.....	3	25	21.00
Total.....	7	35	28.50

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of October, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	82,944	73,274	156,218
Local cargo shipped..... tons..	7,078	722	7,800
Transit cargo arriving..... tons..	2,415,813	2,404,730	4,823,526
Transit cargo clearing..... tons..	2,399,134	2,408,392	4,807,526
Cargo received for transshipment..... tons..	23,691	2,474	26,165
Cargo transhipped..... tons..	24,471	1,935	24,406
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	120	41	161
Number of releases issued.....	732	254	986
Tons received.....	1,450	441	1,891
Tons withdrawn.....	1,686	357	2,043
Packages received.....	5,840	1,673	7,513
Packages withdrawn.....	5,556	3,860	9,416
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	34	1	35
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	8,762	556	9,318
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	69	5	74
U. S. Army, including vessels..... tons..	50	11	61
Individuals and companies..... tons..	145		145
Panama Railroad Company..... tons..	6		6
Transferred to Navy..... tons..	572		572
Total sales and issues..... tons..	9,604	572	10,176

	Cristobal.	Balboa.	Total.
Coal on hand, October 1, 1930.....tons..	77,685		77,685
Coal on hand, November 1, 1930.....tons..	68,081		68,081
Coal received from Navy.....tons..		572	572
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....bbls...	7,529.37	18,265.40	25,794.77
Panama Railroad Company.....bbls...	865.33	460.60	1,325.93
U. S. Army and Navy.....bbls...	525.10	171.21	696.31
Individuals and companies.....bbls...		109.96	109.96
Total sales and issues.....bbls...	8,919.80	19,067.17	27,986.96
Fuel oil on hand November 1, 1930.....bbls...	48,394.74	60,015.68	108,410.42
Diesel oil issued and sold during October.....bbls...	209.93	1,298.50	1,508.43
Diesel oil on hand November 1, 1930.....bbls...	* 1,082.50	10,720.39	11,802.89
Miscellaneous transfers.....bbls...	20,419.73	892.01	21,311.74
Gasoline and kerosene pumped for The Panama Canal.....bbls...	2,386.70	4,244.79	6,631.49
Gasoline pumped for individuals and companies.....bbls...	656.24	6,111.88	6,768.12
Oil pumped for individuals and companies:			
Receipts.....bbls...	282,201.94	396,450.16	678,652.10
Issues.....bbls...	265,980.13	225,601.28	491,581.41
Oil pumped for U. S. Navy.....bbls...	6,851.00	97,131.00	103,982.00
Total fuel oil, gasoline and kerosene handled.....bbls...	587,625.47	750,796.79	1,338,422.26
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	24	4	28
Measured for Panama Canal net tonnage.....	5	3	8
Remeasured for Panama Canal net tonnage.....	19	1	20
Panama Canal net tonnage corrected.....	3	5	8
U. S. equivalent tonnage corrected.....	8	13	21
Services of harbor equipment:			
Tugs, total operating hours.....	391½	299½	691½
Launches, total operating hours.....	1,384½	1,491	2,875½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,836.25	\$8,802.50	\$21,638.75
Pilotage.....	18,744.00	8,804.00	27,548.00
Seamen.....	12,424.00	11,744.00	24,168.00
Launch service.....	2,109.00	2,882.50	4,991.50
Wharfage.....	15,611.25	7,006.21	22,617.46
Ships measured.....	15.00	10.00	25.00
Miscellaneous.....	379.86	148.50	528.36
Ships repaired at Panama Canal shops:			
Commercial.....	37	11	48
U. S. Army and Navy.....	11	7	18
Panama Canal equipment.....	7	11	18
Total.....	65	29	94
Vessels dry docked:			
Commercial.....	7	3	10
U. S. Army and Navy.....		4	4
Panama Canal equipment.....	2	2	4
Total.....	9	9	18
Clearances issued.....	315	273	588
Bills of health issued.....	311	277	588

* Includes 209.93 barrels borrowed from Union Oil Company.

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	584	3,670,222	2,247,881	548	3,386,339	2,088,622
Vessels entering port, but not transiting Canal	65	340,037	202,097	8	42,894	28,031
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	867,760	525,457	111	695,221	418,152
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	576	3,635,113	2,223,650	546	3,393,817	2,091,408
Vessels clearing port, but not transiting Canal	63	334,247	195,846	7	37,860	23,905
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	851,397	515,283	111	702,328	422,473

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,477	1,002	2,479	144	227	371
From Pacific ports.....	153	117	270	206	193	399
Total disembarking.....	1,630	1,119	2,749	350	420	770
Embarking:						
For Atlantic ports.....	932	1,203	2,135	53	37	90
For Pacific ports.....	117	218	335	307	242	549
Total embarking.....	1,049	1,421	2,470	360	279	639
Remaining on board:						
From Atlantic to Pacific ports.....	2,407	4,302	6,709	1,957	3,656	5,613
From Pacific to Atlantic ports.....	996	2,127	3,123	1,034	2,072	3,106
From Atlantic to Atlantic ports.....	385	144	529	15	58	73
From Pacific to Pacific ports.....						
Total remain on board.....	3,788	6,573	10,361	3,006	5,786	8,792
Total arriving.....	5,418	7,692	13,110	3,356	6,206	9,562
Total departing.....	4,837	7,994	12,831	3,366	6,065	9,431

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Percent of total transits.
Atlantic to Pacific.....	265	68	25.6
Pacific to Atlantic.....	252	67	26.6
Total.....	517	135	26.1

In addition to the aforesaid, 53 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 153 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of October, 1930, 39 commercial airplanes entered and 44 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of October, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$2,467.63	\$12,185.18	\$24,342.29	\$92.22	\$7,926.31	\$47,013.63
Government vessels.....	109.75	1,389.42	9,027.01	100.66	1,673.83	12,300.67
P. R. R. vessels.....	2.40	294.88	532.40	897.94	176.60	1,904.22
Total sales, October, 1930...	2,579.78	13,869.48	33,901.70	1,090.82	9,776.74	61,218.52
Total sales, October, 1929...	2,920.61	15,968.04	40,869.40	1,099.89	8,497.38	69,355.32
Total sales, October, 1928...	3,225.87	12,899.79	42,843.28	1,057.09	6,798.18	66,824.21
Sales at Balboa to:						
Commercial vessels.....	1,193.81	1,616.81	14,758.41	592.18	10,606.51	28,767.72
Government vessels.....	305.55	1,238.86	12,280.64	115.56	2,599.09	16,539.70
P. R. R. vessels.....				33.94		33.94
Total sales, October, 1930...	1,499.36	2,855.67	27,039.05	741.68	13,205.60	45,341.36
Total sales, October, 1929...	1,566.71	14,883.54	42,100.17	1,404.99	8,043.58	67,998.99
Total sales, October, 1928...	606.95	19,660.73	40,075.87	935.58	7,260.91	68,540.04

The aggregate sales to Government vessels during the month were \$28,840.37; to Panama Railroad vessels, \$1,938.16; and to other commercial vessels, \$75,781.35, making the total sales to all vessels, \$106,559.88.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of October, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †					
	North.	South.	Total.	North.	South.	Total.	Oct., 1928.	Oct., 1929.	Oct., 1930.
Gatun.....	248	249	497	14	10	24	539	563	521
Pedro Miguel.....	248	255	503	17	14	31	576	576	534
Miraflores.....	247	255	502	17	12	29	569	574	531
Number of vessels put through locks.									
Gatun.....	255	265	520	35	28	63	612	658	583
Pedro Miguel.....	252	264	516	41	35	76	673	647	592
Miraflores.....	252	264	516	36	33	69	672	645	585

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	46	38	38
Panama Canal equipment.....	6	30	23
Launches (under 20 tons).....	8	5	5
Vessels for repairs.....	1	1	1
Panamanian Government vessels.....	2	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in October, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.....	<i>Cubic feet.</i> 2,150,900,000	<i>Cubic feet.</i> 1,791,920,000	<i>Cubic feet.</i> 1,574,580,000
Maintenance.....	51,880,000	4,060,000	4,060,000
Leakage.....	40,000,000	14,000,000	20,000,000
Total, October, 1930.....	2,242,780,000	1,805,920,000	1,598,640,000
Total, September, 1930.....	1,913,000,000	1,489,810,000	1,415,470,000
Total, October, 1929.....	2,317,260,000	1,845,530,000	1,773,720,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of October, 1930, are shown in comparative form in the following tabulation:

	October.		October—Years of record.		
	1929.	1930.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 3,396	<i>C. f. s.</i> 3,355	<i>C. f. s.</i> 8,126	<i>C. f. s.</i> 2,031	<i>C. f. s.</i> 3,565
Maximum momentary discharge for the month.....	22,860	16,766	108,300	8,336	12,470
Gatun Lake watershed, total yield.....	10,464	8,336	27,269	7,719	11,906
Gatun Lake watershed, net yield.....	9,832	7,719	26,815	7,719	11,906
Draft on Gatun Lake for lockages and power.....	3,058	2,996	3,058	1,191	2,382

¹ October 22, 1923.

² 1914 excluded.

³ Hydroelectric plant carried full load.

The monthly mean discharge of the Chagres River at Alhajuela for October, 1930, was 3,355 c. f. s., which is 6 per cent below the 29-year average of 3,565 c. f. s. The maximum monthly mean discharge on record for October is 8,126 c. f. s. in 1923, and the minimum is 2,031 c. f. s. in 1904. Rises of five feet or more at Alhajuela occurred on the 9th, 22d, and 23d. The maximum momentary discharge for the

month was 16,766 c. f. s. at elevation 100.42 feet on the 22d, and the minimum was 1,836 c. f. s. at elevation 92.92 feet on the 9th. The maximum momentary discharge on record for October is 108,300 c. f. s. at elevation 117.42 feet on October 22, 1923, and the minimum is 1,290 c. f. s. at elevation 92.60 feet on October 17, 1911.

Gatun Lake varied in elevation during October from a minimum of 85.93 feet on the 6th, to a maximum of 86.55 feet on the 31st, and averaged 86.21 feet. The elevation on September 30th was 86.02 feet, and at midnight on October 31st, 86.50 feet, showing a net rise during the month of forty-eight hundredths of a foot. The total yield of Gatun Lake watershed was 8,336 c. f. s., which is 33 per cent below the 17-year average of 12,470 c. f. s., and the minimum for the 17-year period. The maximum total yield for October is 27,260 c. f. s. in 1923.

Miraflores Lake varied between elevations 52.86 feet on the 24th and 54.48 feet on the 18th. The mean elevation for the month was 53.80 feet and at midnight on the 31st it was 53.75 feet.

SEISMOLOGY.

No seismic disturbances were recorded during the month.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,249,800 kilowatt hours, and the computed water consumption was 4,028,497,842 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,700 kilowatt hours, and the fuel oil consumption was 15.68 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 494 work orders issued during the month, as compared with 422 issued during the previous month.

MECHANICAL DIVISION.

During the month of October, 1930, miscellaneous repairs were made on 55 vessels at Cristobal and 29 at Balboa. Nine vessels were dry-docked at Cristobal and 9 at Balboa. Work was completed on the annual overhaul of the tug *Engineer* of the Marine Division. Work was completed during the month on the U. S. S. *Mallard* and the submarine *S-20* which were at the Balboa shops for interim docking. Work on the U. S. S. *Sciota*, which entered drydock last month for overhaul, was carried forward during the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the Canal to the Zone boundary near Arraijan, 4,500 lineal feet of right-of-way were cleared and 1,327 cubic yards excavated. Due to wet weather, work on this road was reduced to a minimum on October 6.

Miscellaneous municipal work around the Naval Air Station, Coco Solo, consisting of excavating, grading, paving, curbing, etc., was continued during October.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 733,720,250 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of nine-tenths of a foot toward the Canal between stations 1770-00 and 1795-00 W., and six-tenths of a foot southward between stations 1771-00 and 1777-00 W. The reference points on this slide also showed a small movement. There was a slight surface movement on West Lirio slide throughout the month, which caused a slight shoaling along the west prism line. South Cucaracha slide and Cucaracha Signal Station slide each showed slight surface movements during the month, but no appreciable amount of material entered the Canal prism. There were a few new bank breaks during the month throughout the Cut. There was no interference with shipping on account of slides during the month.

The total excavation during October, 1930, was 821,320 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Atlantic entrance, maintenance	190,000	.....	190,000
Gaillard Cut, Project No. 3	24,150	96,500	120,650
Pacific entrance, Project No. 1	7,000	15,950	22,950
Pacific entrance, maintenance	12,250	.....	12,250
Balboa inner harbor, Project No. 1	18,000	42,000	60,000
Balboa inner harbor, maintenance	412,400	.....	412,400
Plant excavation:			
Colon fill	1,000	.....	1,000
Dredging sand at Chame	2,070	.....	2,070
Total	666,870	154,450	821,320

The ferry crossing at the north end of Pedro Miguel locks operated 31 days during the month. One thousand three hundred sixty-eight single trips were made, and 95 Panama Canal, 33 U. S. Army, and 4,234 other vehicles, a total of 4,362 were ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Fifty-two linear feet of test pits for rock investigations and four hundred eighty linear feet of drilling with diamond and shot drills were completed during the month.

Survey for transmission line from Summit to Madden Dam was continued from the Canal Zone 5-mile boundary line to Summit. A section on the Summit end and another section near the Pedro Miguel River crossing were relocated. About 7 miles of profile were completed. Compression tests were made at Miraflores laboratory of stone from shot drill cores and 2-inch diamond drill cores. Permeability tests were made from 2-inch cores. A report was received of clay content of damsite rock. Observations of water table, silt analysis, and stream gauging were continued. Two flood warnings were received on days on which the river rose more than 10 feet, the arbitrary limit set for such warnings. Studies were continued for the main dam, power plant, spillway, transmission line, substation, and switching station at Summit.

SCHOOLS.

The Canal Zone white schools opened on October 1st. The colored schools operate on a 12-month basis. Compared with October, 1929, the white school attendance was increased by 87 pupils and that of the colored schools by 246 pupils, with 9 additional white teachers and 8 additional colored teachers to take care of the increased enrollment.

The following tabulation shows the enrollment and number of teachers for October, 1929 and 1930:

	October, 1929.	October, 1930.
White schools:		
Gross enrollment	2,610	2,697
Teachers (including superintendent and assistants, principals and supervisors)	100	109
Colored schools:		
Gross enrollment	3,789	4,035
Teachers (including principals)	85	93

Included in the increase in the white teaching personnel are one assistant to the superintendent as Director of Research, and 3 supervisors.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on October 31, 1930, was 23,456, composed of 8,018 Americans, 2,869 of whom were men, 2,417 women, and 2,732 children; 181 Europeans, 81 of whom were men, 30 women, and 70 children; and 15,257 West Indians, 4,208 of whom were men, 2,787 women, and 8,262 children. The total number of persons in quarters on October 31, 1929, was 22,082.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of October 15, 1930, with a comparison of the working force for the preceding month and for October, 1929:

	Total employees.		As of October 15, 1930.		
	October, 1929.	September, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	125	119	54	64	118
Electrical.....	320	363	164	204	368
Municipal Engineering.....	856	1,220	99	771	870
Lock operation.....	954	956	243	716	959
Dredging.....	1,246	1,136	199	995	1,194
Madden Project.....	706	253	21	185	206
Mechanical.....	1,408	1,395	503	926	1,429
Marine.....	818	782	199	605	804
Fortifications.....	325	249	21	338	359
Total.....	6,758	6,473	1,503	4,804	6,307
Supply Department:					
Quartermaster.....	2,477	1,906	209	1,561	1,770
Commissary.....	1,511	1,593	236	1,351	1,587
Cattle Industry—Plantations.....	118	97	2	95	97
Hotel Tivoli.....	114	116	8	106	114
Hotel Washington.....	107	106	8	100	108
Transportation.....	305	325	77	248	325
Total.....	4,632	4,143	540	3,461	4,001
Accounting Department.....	207	209	203	6	209
Health Department.....	1,183	1,129	285	812	1,097
Executive Department.....	851	857	548	335	883
Total.....	2,241	2,195	1,036	1,153	2,189
Panama Railroad Company:					
Superintendent.....	347	304	48	257	305
Transportation.....	182	189	67	123	190
Receiving and Forwarding Agency.....	1,309	1,143	81	1,035	1,116
Coaling Stations.....	318	268	43	188	231
Total.....	2,156	1,904	239	1,603	1,842
Grand total, October, 1929.....	15,787				
Grand total, September, 1930.....		14,715			
Grand total, October, 1930.....			3,318	11,021	14,339

Additions to the gold force on the Isthmus in October were as follows: Employed in the United States, 35; reemployed in the United States, 15; employed on the Isthmus, 7; reemployed on the Isthmus, 3; total 60. Separations from the gold force totaled 36, as follows: Resigned, 17; discharged, 15; retired, 2; died, 2. At the end of the month there were on file 630 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 184 deaths occurred during the month of October, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 15.37 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 26; tuberculosis (various organs), 22; organic diseases of the heart, 22; diarrhea and enteritis, 14; and nephritis (acute and chronic), 12. There were 10 deaths from cancer, 7 from syphilis, and 1 each from leprosy and tetanus. There were 29 deaths among non-residents; these are not included in the above statistics.

There were 371 live births and 21 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 32.75. Deaths among children under 1 year of age numbered 42, giving an infant mortality rate, based on the number of live births reported, of 113.21.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 123, of whom 23 were employees (6 white and 17 colored), 16 were members of employees' families (3 white and 13 colored), 12 were Canal Zone agriculturists, 43 were other civilian nonemployees, and 29 were Army and Navy personnel. Of the 39 employees and members of employees' families, 29 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents, the infection being received while in an unsanitated area near the mouth of the Chagres River.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$384,908.34, of which \$367,872.52 was for the Department of Operation and Maintenance, and \$17,035.82 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$30,058.02.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of September, 1930, as compared with September, 1929, with the figures for the first three months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of October at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	September, 1929.	September, 1930.	To end of September.	
			Last year.	This year.
Tolls.....	\$2,201,833.29	\$2,057,205.25	\$6,788,892.17	\$6,316,913.69
Other receipts.....	335,150.54	309,085.72	1,053,081.85	985,002.73
Total transit revenues.....	2,536,983.83	2,366,290.97	7,841,974.02	7,301,916.42
Total transit expenses.....	1,103,396.22	1,082,444.96	3,282,244.68	3,294,048.89
Net transit revenues.....	1,433,587.61	1,283,846.01	4,559,729.34	4,007,867.53
Three per cent capital charge...	619,953.99	625,683.92	1,860,715.31	1,877,051.76
Transit surplus.....	813,633.62	658,162.09	2,699,014.03	2,130,815.77
Business revenues.....	1,440,047.96	1,245,000.81	4,811,347.26	4,969,079.98
Business expenses.....	1,390,316.87	1,192,808.38	4,537,990.89	4,758,729.69
Net business revenues.....	49,731.09	52,192.43	273,356.37	210,350.29
Three per cent capital charge.....	61,822.42	64,898.22	198,587.51	208,102.50
Business surplus.....	*12,091.33	*12,705.79	74,768.86	2,247.79
Combined revenues.....	3,977,031.79	3,611,291.78	12,653,321.28	12,270,996.40
Combined expenses.....	2,493,713.09	2,275,253.34	7,820,235.57	8,052,778.58
Net revenues.....	1,483,318.70	1,336,038.44	4,833,085.71	4,218,217.82
Three per cent capital charge.....	681,776.41	690,582.14	2,059,302.82	2,085,154.26
Combined surplus.....	801,542.29	645,456.30	2,773,782.89	2,133,063.56

* Denotes deficit.

Respectfully,

H. BURGESS,
Governor.

United States Intercoastal Traffic by Commodities for October, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for October, 1930, and the totals for October 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo. These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	820	.....	820
Alfalfa.....	.....	2,241	2,241
Alfalfa meal.....	.....	2,194	2,194
Ammonia.....	35	.....	35
Asbestos.....	442	24	466

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Asphalt.....	110	31	141
Automobiles.....	1,671	290	1,961
Automobile accessories.....	3,307	114	3,421
Bamboo.....		2	2
Bark, cascará.....		51	51
Beans.....	36	8,095	8,131
Borax.....		721	721
Bran.....		5	5
Bricks.....	20		20
Burlap.....	172	22	194
Calcium carbide.....	72		72
Canned:			
Fish.....	706	18,304	19,010
Fruit.....	299	48,326	48,625
Meat.....	36		36
Milk.....	169	327	496
Soup.....	3,374	100	3,474
Vegetables.....	2,932	7,985	10,917
Miscellaneous.....	2,147	8,799	10,946
Carbon black.....	5		5
Celite filtereel.....		871	871
Cement.....	355	70	425
Charcoal.....	170		170
Chemicals.....	2,597	496	3,093
China and fire clay.....	95	37	132
Coal.....	1,461		1,461
Cocoa.....	192		192
Coconuts.....	100	521	621
Coffee.....	125	157	282
Coke.....	11		11
Cold storage:			
Butter.....	30		30
Cheese.....	120	125	245
Eggs.....		131	131
Fish.....	66		66
Lard.....	145	40	185
Other.....	1,050		1,050
Confectionery.....	951		951
Copra.....		120	120
Corn.....	18		18
Cotton.....	349	712	1,061
Cottonseed oilcake.....	600		600
Cottonseed meal.....		261	261
Drugs.....	1,216	223	1,439
Dyewoods.....	400		400
Earthenware.....	64	36	100
Explosives.....	39	80	119
Fertilizer.....	505		505
Flour.....	186	5,850	6,036
Fruit:			
Dried.....		19,026	19,026
Fresh.....	231	1,585	1,816
Fullers earth.....	520		520
Furniture.....	432	147	579
General.....	39,389	20,530	59,919
Glass and glassware.....	2,337	6	2,343
Glue.....	31	71	102
Hair.....		18	18
Hardwoods.....	493	9	502
Hay.....	30	1,651	1,681
Hemp.....		260	260
Honey.....		319	319
Hops.....		113	113
Horns and hoofs.....		7	7
Infusorial earth.....		21	21
Jute.....	48	17	65
Lard substitute.....	2,299		2,299
Leather.....	16		16
Linoleum.....	678	129	807
Liquors.....	47		47
Lumber.....	1,280	137,610	138,890
Manufactured goods:			
Iron and steel.....	62,470	6,087	68,557
Machinery.....	3,097	1,084	4,181
Railroad material.....		202	202
Tinplate.....	5,150		5,150
Textiles.....	4,393	8	4,401
Miscellaneous.....	8,176	786	8,962
Matches.....	117		117
Metals:			
Antimony.....		70	70
Copper.....	152	4,794	4,946
Iron.....	2,126		2,126
Lead.....	50		50
Scrap.....	194	137	331

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Metals—Continued:			
Tin.....		15	15
Zinc.....	24	1,624	1,648
Other.....	250	1	251
Milk, powdered.....	55	375	430
Molasses.....	71		71
Musical instruments.....	12		12
Nitrates.....	41		41
Nuts.....	58	330	388
Oats.....	133	66	199
Oils:			
Cottonseed.....	50	820	870
Gas oil, fuel oil.....		53,275	53,275
Gasoline, benzine, naphtha.....	6	208,829	208,835
Kerosene.....		9,750	9,750
Lubricating and greases.....	4,114	590	4,704
Vegetable.....	980	130	1,110
Other.....	267	902	1,169
Ores:			
Copper.....		1,220	1,220
Magnetite.....		1,117	1,117
Zinc.....	19	550	569
Other.....		126	126
Paint.....	554	144	698
Paper.....	6,200	9,402	15,602
Paper pulp.....		6,531	6,531
Paper roofing.....	48		48
Peanuts.....	575	59	634
Peas.....		331	331
Phosphates.....	2,035		2,035
Porcelain.....	122	440	562
Rags.....		85	85
Rice.....	713		713
Rope.....	42	94	136
Ro-in.....	325		325
Rubber:			
Manufactured.....	757	108	865
Scrap.....		10	10
Salt.....	98		98
Seeds:			
Grass.....		632	632
Hemp.....		90	90
Other.....		236	236
Shells.....	410		410
Silk.....		904	904
Skins and hides.....		3,377	3,377
Slate.....	162		162
Soap.....	2,486	198	2,684
Soda.....	354	18	372
Soda ash.....	2,351		2,351
Soda, bicarbonate.....	93		93
Soda, caustic.....	142		142
Starch.....	40		40
Sugar.....	25	9,573	9,598
Sulphur.....	13,734		13,734
Syrup.....	179	23	202
Talc.....		185	185
Tallow.....		242	242
Tea.....	27	64	91
Tobacco.....	2,016		2,016
Toys.....	353	15	368
Turpentine.....	53		53
Vegetables.....		58	58
Waste.....	38	54	92
Wax.....	50	35	85
Wheat.....		8	8
Wine.....		214	214
Wool.....		1,176	1,176
Zinc oxide.....	78		78
Total, October, 1930.....	201,296	615,872	817,168
Total, October, 1929.....	282,546	753,288	1,035,834
Total, October, 1928.....	298,721	538,857	837,578

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending November 22, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Buenaventura.....	Panama R. R. S. S. Line.....	.....	November 4.....	.....	276
Brielle.....	Hamburg-American Line.....	November 8.....	November 9.....	(¹)	159
Durazzo.....	Hamburg-American Line.....	.....	November 9.....	.....	210
Ancon.....	Panama R. R. S. S. Line.....	.....	November 9.....	.....	637
Manizales.....	North German Lloyd.....	.....	November 9.....	.....	67
Caldas.....	United Fruit Co.....	.....	November 14.....	.....	165
Tolosa.....	United Fruit Co.....	November 9.....	November 9.....	2	500
Costa Rica.....	Royal Netherlands S. S. Co.....	November 9.....	November 9.....	37	54
Dora K.....	R. Feuillebois.....	November 9.....	November 10.....	(¹)	16
Guadeloupe.....	French Line.....	November 9.....	November 12.....	33	900
Champerico.....	Pacific Steam Navigation Co.....	November 9.....	November 15.....	332	195
Orita.....	Pacific Steam Navigation Co.....	November 10.....	November 10.....	7	(²)
August Thyssen.....	Aluminium Line.....	November 10.....	November 10.....	365	73
Pastores.....	United Fruit Co.....	November 10.....	November 12.....	717	43
Santa Inez.....	Grace Line.....	November 11.....	November 11.....	200	222
Taketoyo Maru.....	Nippon Yusen Kaisha.....	November 11.....	November 11.....	117	(²)
Almelo.....	Royal Netherlands S. S. Co.....	November 11.....	November 12.....	195	178
Zenon.....	French Line.....	November 11.....	November 12.....	74	60
Gottengen.....	North German Lloyd.....	November 12.....	November 12.....	89	176
Metapan.....	United Fruit Co.....	November 12.....	November 13.....	490	180
Santa Barbara.....	Grace Line.....	November 12.....	November 13.....	104	52
Bridgetown.....	United Fruit Co.....	November 13.....	November 13.....	86	24
Patrick Henry.....	Tampa Intercocean Co.....	November 13.....	November 13.....	180	(²)
Indiana.....	French Line.....	November 13.....	November 13.....	23	35
Iriona.....	United Fruit Co.....	November 13.....	November 13.....	818	19
Canada.....	Johnson Line.....	November 13.....	November 13.....	(¹)	73
Ansgir.....	Roland Line.....	November 13.....	November 14.....	28	75
Baralt.....	Royal Netherlands S. S. Co.....	November 13.....	November 16.....	333	36
Ebro.....	Pacific Steam Navigation Co.....	November 14.....	November 14.....	13	(²)
President Adams.....	Dollar Line.....	November 14.....	November 14.....	1	(²)
Oakland.....	Hamburg-American Line.....	November 14.....	November 14.....	168	63
Amapala.....	Standard Fruit & S. S. Co.....	November 14.....	November 15.....	117	387
Cerizo.....	Hamburg-American Line.....	November 14.....	November 16.....	842	179
San Simeon.....	Quaker Line.....	November 15.....	November 15.....	28	(²)
Teutonia.....	Hamburg-American Line.....	November 15.....	November 15.....	.....	210
Rhodopis.....	Hamburg-American Line.....	November 15.....	November 15.....	50	81
Iriona.....	United Fruit Co.....	November 15.....	November 15.....	(¹)	447
Sparreholm.....	Aluminium Line.....	November 15.....	November 15.....	338	73
Lochkatrine.....	Pacific Steam Navigation Co.....	November 15.....	November 15.....	16	22
La Esfera.....	F. Franco.....	November 15.....	November 15.....	(²)	3
Costa Rica.....	Royal Netherlands S. S. Co.....	November 15.....	November 16.....	4	239
Adalia.....	Hamburg-American Line.....	November 15.....	November 16.....	174	92
Cauca.....	United Fruit Co.....	November 15.....	November 22.....	189	174
Aachen.....	North German Lloyd.....	November 16.....	November 16.....	16	11
Kinai Maru.....	Osaka Shosen Kaisha.....	November 16.....	November 16.....	66	105
Pastores.....	United Fruit Co.....	November 16.....	November 16.....	10	701
Alvarado.....	Pacific Steam Navigation Co.....	November 16.....	November 17.....	275	171
Lobos.....	Pacific Steam Navigation Co.....	November 16.....	November 17.....	95	19
Dramatist.....	T. & J. Harrison.....	November 16.....	November 17.....	328	(²)
Albert Vogler.....	Hamburg-American Line.....	November 16.....	November 17.....	59	40
Leme.....	Panama R. R. S. S. Line.....	November 16.....	November 17.....	130	(²)
Genevieve Lykes.....	Lykes Brothers.....	November 17.....	November 17.....	500	(²)
Pearl Marie.....	R. Feuillebois.....	November 17.....	November 17.....	(¹)	12
Waunta.....	Standard Fruit & S. S. Co.....	November 17.....	.....	454	.....
Santa Elisa.....	Grace Line.....	November 17.....	November 18.....	75	336
Galicia.....	Hamburg-American Line.....	November 17.....	November 18.....	70	121
Ulua.....	United Fruit Co.....	November 17.....	November 19.....	358	8
City of San Francisco.....	Panama Mail S. S. Co.....	November 17.....	November 22.....	412	908
Laguna.....	Pacific Steam Navigation Co.....	November 18.....	November 18.....	260	(²)
Los Angeles.....	Hamburg-American Line.....	November 18.....	November 19.....	75	147
Abraham Lincoln.....	Fred Olsen Line.....	November 18.....	November 19.....	561	(²)
Columbia.....	Panama Mail S. S. Co.....	November 18.....	November 19.....	215	440
Cristobal.....	Panama R. R. S. S. Line.....	November 19.....	.....	3,876	.....
Cali.....	North German Lloyd Line.....	November 19.....	.....	964	.....
Sixaola.....	United Fruit Co.....	November 19.....	November 20.....	662	175
Venezuela.....	Panama Mail S. S. Co.....	November 19.....	November 20.....	317	449
Tela.....	United Fruit Co.....	November 19.....	November 20.....	1,062	70
Ariguani.....	United Fruit Co.....	November 19.....	November 19.....	4	.....
Orbita.....	Pacific Steam Navigation Co.....	November 19.....	November 20.....	45	279
Salvador.....	Pacific Steam Navigation Co.....	November 20.....	.....	154	.....
Oregon.....	French Line.....	November 20.....	November 20.....	34	145
Pacific Shipper.....	Furness, Withy & Co.....	November 20.....	November 21.....	(¹)	583
Aconcagua.....	Chilean Line.....	November 21.....	November 21.....	(¹)	53
Saramacca.....	United Fruit Co.....	November 21.....	November 22.....	429	(²)
Cefalu.....	Standard Fruit & S. S. Co.....	November 21.....	November 22.....	100	340
Bolivar.....	United Fruit Co.....	November 22.....	.....	53	.....
San Anselmo.....	Quaker Line.....	November 22.....	November 22.....	15	(²)
Noss King.....	N. O. & S. A. S. S. Co.....	November 22.....	November 22.....	138	(²)
Caldas.....	United Fruit Co.....	November 22.....	.....	783	.....
Tela.....	United Fruit Co.....	November 22.....	November 22.....	50	217
Toba Maru.....	Nippon Yusen Kaisha.....	November 22.....	November 22.....	62	(²)
Sosua.....	United Fruit Co.....	November 22.....	November 22.....	(¹)	200
Juan S. Elcano.....	Spanish Line.....	November 22.....	.....	250	.....

* No cargo discharged.

* No cargo laded.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 22, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or Operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Baralt.	13	16.05	16	6.05	16	13.30	16	Royal Neth. S. S. Co.	202.0	33.1	10.8	Cristobal, C. Z.	Guayaquil, Ecuador	General	35	1,183	742
Adalia.	15	17.30	16	6.15	16	13.28	17	Hamburg-American Line	337.0	48.2	17.5	Hamburg, Germany	Anapala, Honduras	General	1,430	4,284	3,054
Charles Nelson.	15	20.10	16	6.40	16	14.01	16	Nelson Line	380.4	53.1	19.6	New York, N. Y.	Seattle, Wash.	General	3,050	5,659	4,138
Heffron.	15	20.50	16	7.05	16	14.47	16	Isithian S. S. Lines	440.0	56.0	23.9	Baltimore, Md.	Vancouver, B. C.	General	6,740	8,312	6,097
Irishbank.	15	23.40	16	7.45	16	15.41	16	Andrew Weir & Co.	426.7	57.4	19.6	Baltimore, Md.	Dahly, China	General	3,050	7,623	5,336
Munihades.	16	2.10	16	8.15	16	16.40	16	Munson S. S. Line	370.0	53.0	21.6	Baltimore, Md.	Tacoma, Wash.	General	5,234	5,525	4,187
Cerigo.	14	18.50	16	8.45	16	17.35	16	Hamburg-American Line	227.0	34.0	14.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	150	1,572	1,011
Arto.	16	4.00	16	8.35	16	17.41	16	Standard Transp. Co.	435.6	56.2	21.0	Providence, R. I.	Los Angeles, Calif.	Ballast	7,386	5,117	
Sir Karl.	16	7.00	16	10.40	16	18.10	16	Anglo-Saxon Pet. Co.	450.5	59.2	20.3	New York, N. Y.	Los Angeles, Calif.	Ballast	8,045	5,592	
Sabotawan.	16	9.10	16	12.05	16	19.40	16	Redwood Line	385.2	52.2	23.6	New Orleans, La.	Seattle, Wash.	General	6,106	5,708	4,138
Standard Arrow.	16	10.00	16	13.05	16	20.48	16	Standard Transp. Co.	407.6	62.7	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast	9,698	6,783	
Unden.	16	10.10	16	14.05	16	21.55	17	Transatlantic S. S. Co.	366.0	51.6	25.0	Antwerp, Belgium	San Francisco, Cal.	Silver sand	5,000	5,336	3,708
Lobos.	16	16.10	17	6.00	17	13.05	17	Pacific Steam Nav. Co.	404.7	52.4	25.0	Hull, England	Magallanes, Chile	General	7,355	7,151	4,756
Ousebridge.	16	21.30	17	6.05	17	13.48	17	N. of England S. S. Co.	406.0	56.0	16.0	Norfolk, Va.	British Columbia	Ballast	7,355	7,151	4,756
Steel Inventor.	17	4.30	17	7.20	17	15.00	17	Isithian S. S. Lines	424.0	56.0	25.0	Baltimore, Md.	Vancouver, B. C.	General	7,423	7,611	5,450
Dionede.	17	7.00	17	7.20	17	15.18	18	British Government	445.0	46.5	17.4	Kingston, Jamaica	New Zealand	Ballast	5,240	8,204	6,197
Liberator.	17	5.10	17	8.15	17	15.47	17	Tampa Inter-ocean Co.	410.0	56.0	24.4	New Orleans, La.	Tsingtao, China	General	6,202	4,623	
Silksworth.	17	8.40	17	9.40	17	17.41	17	R. & J. Dalglish, Ltd.	415.0	53.0	15.8	Newcastle, England	Vancouver, B. C.	General	6,202	4,623	
Dramatist.	16	13.35	17	11.15	17	18.17	17	T. & J. Harrison	410.0	52.0	17.2	Liverpool, England	Nanaimo, B. C.	General	6,202	4,623	
Alvarado.	15	20.35	17	12.05	17	19.13	17	Pacific Steam Nav. Co.	393.0	43.0	16.0	New York, N. Y.	Callao, Peru	General	666	2,844	1,748
Lene.	16	20.45	17	13.15	17	21.15	17	Navy Libera-Triestina	450.0	57.0	14.0	Naples, Italy	Vancouver, B. C.	General	1,244	8,805	6,497
Santa Elisa.	17	14.55	18	6.10	18	12.48	19	Grace Line	369.3	51.7	24.7	New York, N. Y.	Valparaiso, Chile	General	2,441	5,957	4,325
Gettrude.	17	21.50	18	6.20	18	13.41	18	A. P. Moller	419.0	55.0	23.0	New York, N. Y.	Saigon, China	General	4,912	7,385	5,500
Maersk.	17	21.50	18	6.20	18	13.41	18	Pacific Atlantic S. S. Co.	387.0	52.2	15.0	Baltimore, Md.	Portland, Oreg.	Gen. lub. oil	1,585	5,719	4,023
San Gabriel.	18	7.25	18	7.35	18	15.07	18	Atlantic Refining Co.	385.2	51.0	18.3	Philadelphia, Pa.	La Libertad, Ecua.	Ballast	4,851	3,326	
El Lobo.	18	8.05	18	8.20	18	15.32	18	Amer-Hawaiian Line	471.0	57.2	19.0	Boston, Mass.	Tacoma, Wash.	General	1,812	9,154	6,906
Texan.	18	9.40	18	9.45	18	15.57	18	Standard Oil Co.	425.0	57.2	19.6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast	7,481	4,975	
S. C. T. Dodd.	18	10.30	18	10.45	18	17.41	18	Arrow Line	409.0	54.0	17.0	Baltimore, Md.	Seattle, Wash.	General	2,822	6,621	4,891
Constance.	18	16.00	18	16.15	19	9.58	19	Panama Mail S. S. Co.	445.0	56.0	21.0	New York, N. Y.	San Francisco, Cal.	Coffee, general	1,254	6,015	4,281
Chandler.	18	5.15	19	6.10	19	14.26	19	U. S. Navy	455.0	54.0	18.0	Cristobal, C. Z.	Los Angeles, Calif.	Ballast	3,100	6,081	4,538
Colombia.	17	14.05	19	6.10	19	14.42	19	Fern Line	377.6	54.0	18.0	Galveston, Tex.	Shanghai, China	Cotton	3,519	8,695	6,375
Cuyamilla.	19	6.50	19	7.25	19	15.12	19	Lukenbach Line	445.0	58.0	19.6	Boston, Mass.	Portland, Oreg.	General	3,519	8,695	6,375
Furnhill.	19	7.05	19	8.20	19	15.42	19	Gildemeister Valparaiso	130.5	23.1	8.0	Hamburg, Germany	Valparaiso, Chile	General	102	392	293
Robert.	18	16.55	19	12.20	19	22.20	00	Hamburg-American Line	432.2	59.1	23.3	Hamburg, Germany	Vancouver, B. C.	General	5,591	8,454	6,344

* For orders.

* Steel, tinplate, and hardware.

* Steel and canned goods.

* Steel and hardware.

* Steel and canned goods.

Abraham	18	20	50	19	15	00	19	21	42	20	22	50	Norwegian.	Fred Olsen & Co.	435	0	56	0	24	5	Osto, Norway	Vancover, B. C.	General	5,104	8,005	5,957
Lincoln	19	14	35	20	5	58	20	13	07	20	14	30	British.	Pacific Steam Nav. Co.	519	0	67	0	28	8	Liverpool, England	Talcahuano, Chile.	General.	3,170	16,844	11,731
Orbit	20	5	00	20	7	00	20	13	47	20	21	25	American.	Roosevelt S.S. Co., S.B.	450	0	55	0	21	10	New York, N. Y.	Fremantle, Aust'lia	Gen. case oil.	4,742	7,342	5,247
Ward	13	16	35	20	8	40	20	16	17				American.	U. S. Navy	225	0	41	0			Bluefields, N. Y.	Balboa, C. Z.	Ballast.			
Ashville	5	15	50	20	18	30	21	11	33	21	15	05	Norwegian.	Pet. Stor. & Fin. Corp.	442	7	53	8	19	6	Jarrow, England.	Los Angeles, Calif.	Ballast.	7,539	5,044	
Morgen	5	15	50	20	18	30	21	11	33	21	15	05	Norwegian.	U. S. Navy	385	0	53	8	19	6	Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Roecker	20	14	30	21	6	00	21	13	39				American.													
Washington	20	7	45	21	6	00	21	14	04	21	15	20	Japanese.	Kokusai Kisen Kaisha.	385	0	51	0	15	1	Kingston, Jamaica.	Chile.	Ballast.	5,919	4,400	
Maru	21	5	55	21	7	15	21	15	07	21	16	40	British.	Com'lth & Dom. Line.	480	3	69	5	23	7	New York, N. Y.	Fremantle, Aust'lia	General.	1,642	10,785	8,141
Pacific	20	17	35	21	8	05	21	15	21	16	40		British.	Furness, Withy & Co.	410	0	58	0	19	4	Glasgow, Scotland	Vancover, B. C.	General	1,332	7,892	5,858
Shipper	20	17	35	21	8	05	21	15	21	16	40		British.	Lobatos Oilfields.	450	0	60	0	20	0	Glasgow, Scotland	Los Angeles, Calif.	Ballast	8,416	5,805	
El Mirlo	21	00	25	21	10	55	21	16	58	21	18	05	Danish.	Dupont & Co.	385	0	54	0	15	5	Baltimore, Md.	Coronel, Chile.	General	3,000	6,591	4,936
Norhavet	21	00	25	21	10	55	21	16	58	21	18	05	Danish.	Ch. Sud. Amer. de Vap.	422	8	56	2	24	6	New York, N. Y.	Valparaiso, Chile.	General	1,625	7,764	4,705
Aconcagua	20	33	20	8	20	21	8	50	21	18	12	21	Chilean													
Dilworth	21	13	25	21	13	35	21	20	55	21	22	15	American.	Tide-water Oil Co.	435	0	56	0	21	0	New York, N. Y.	Valparaiso, Calif.	Ballast.	7,741	5,077	
City of San																										
Francisco	17	16	45	22	6	05	22	13	35	22	15	30	American.	Panama Mail S. S. Co.	296	1	45	0	16	6	Cristobal, C. Z.	San Francisco, Cal.	General.	898	3,848	2,696
Suramea	21	15	00	22	6	10	22	13	50	22	15	30	British.	United Fruit Co.	336	7	63	2	17	10	Cristobal, C. Z.	San Francisco, Cal.	General.	3,668	2,308	
Port Huon	22	6	00	22	6	25	22	14	28	22	22	35	American.	Com'lth & Dom. Line.	477	43	62	0	22	0	London, England.	Wellington, N. Z.	General.	6,392	10,720	7,692
Leticia	22	7	35	22	7	45	22	15	20				British.	Trinidad Leaseholds	394	0	51	0	16	6	Kingston, Jamaica.	Balboa, C. Z.	Ballast.	4,959	3,228	
Tanger	22	9	03	22	7	45	22	15	20				Norwegian.	Westfal, Larsen & Co.	368	0	54	0	16	11	Buenos Aires, Arg.	Vancover, B. C.	(*)	3,625	6,868	5,308
Anco	15	21	15	22	9	20	22	17	58	22	21	15	Columbian.	National Navigation Co.	357	0	42	0	13	0	Cristobal, C. Z.	Buenaventura, Cal.	General	175	238	163
Arca	22	6	50	22	9	55	22	18	00	22	19	15	Yugoslav.	Yugoslav Lloyd, Ltd.	309	4	49	1	22	5	London, England.	San Antonio, Chile.	General	4,877	4,470	3,288
Arca Ragic	22	7	10	22	11	45	22	18	37	22	19	55	American.	States S. S. Co.	409	0	54	0	19	0	Philadelphia, Pa.	Seattle, Wash.	General.	2,545	6,755	4,887
San Anselmo	21	6	10	22	13	20	22	18	40	22	20	50	American.	U. S. Army	309	0	54	2	19	0	Brooklyn, N. Y.	Honolulu, T. H.	Army equipment	3,282		
Kenowis	21	6	10	22	13	20	22	18	40	22	20	50	American.	Swayne & Hoyt	324	0	46	0	20	6	Corpus Christi, Tex.	Seattle, Wash.	General	3,984	2,617	
Point Fernin	22	11	30	22	12	35	22	19	15	22	21	50	American.	Standard Oil Co.	403	3	62	0			New York, N. Y.	Los Angeles, Calif.	Ballast.	9,841	6,946	
Yankee Arrow	22	13	25	22	13	50	22	21	05	22	22	35	American.	Amer-Hawaiian Line.	408	3	62	0			New York, N. Y.	Los Angeles, Calif.	Ballast.	9,841	6,946	
Wahawain	22	13	50	22	15	15	22	21	55	22	22	55	American.							Boston, Mass.	Portland, Ore.	General	2,408	6,766	4,767	

15	21.35	16	6.16	16	14.10	17	7.35	Norwegian.	Anglo-Saxon Pet. Co.	420.3	57.2	26.0	Los Angeles, Calif.	Lands End, Eng. ^{1,2}	9,523	7,442	5,132
15	13.35	16	6.37	16	15.35	16	19.55	Japanese.	Ossaka Shosen Kaisha.	446.0	63.5	22.0	Shanghai, China.	Baltimore, Md.	1,933	8,982	6,272
16	4.50	16	7.11	16	16.40	16	16.40	American.	Cities Service Trans. Co.	431.0	59.2	27.0	Los Angeles, Calif.	Baltimore, Md.	9,689	8,003	5,343
15	19.30	16	7.47	16	17.50	16	17.50	British.	Blue Star Line.	423.5	54.7	22.0	Bellingham, Wash.	Hamburg, Germany	4,401	7,521	5,852
16		16	16.17	16	16.17	16	16.17	American.	H. W. Post.				Bahama, C. Z.	Cristobal, C. Z.			
15	22.45	16	8.34	16	19.09	16	19.00	Greek.	S. Livanos & Co.	303.2	51.9	25.0	Mejillones, Chile.	Acores ^{1,2}	7,040	4,775	3,429
16	5.30	16	8.56	16	18.30	16	22.10	German.	North German Lloyd.	431.2	56.4	24.5	Valparaiso, Chile.	Hamburg, Germany	7,147	4,956	3,429
16	7.10	16	9.39	16	19.30	17	1.10	German.	Hamburg-American Line.	409.8	53.8	22.0	Valparaiso, Chile.	Hamburg, Germany	6,427	7,196	5,514
16	11.30	16	13.44	16	22.40	16	22.10	British.	Sir W. R. Smith & Sons.	411.7	54.5	23.0	Vancouver, B. C.	Cobh, Ireland	8,800	9,657	5,133
16	13.55	16	14.37	16	21.45	16	21.45	American.	Pacific Atlantic S. S. Co.	376.4	52.3	32.3	Longview, Wash.	Baltimore, Md.	5,914	5,455	3,879
16	13.10	17	6.11	17	14.05	19	6.10	American.	U. S. Navy.	475.0	53.0	21.1	Los Angeles, Calif.	Cristobal, C. Z.	2,881		
16	23.00	17	6.58	17	15.55	17	15.50	British.	J. & J. Dehnm.	400.4	52.3	24.0	Antofagasta, Chile.	Acores ^{1,2}	7,400	5,710	4,022
16	23.00	17	7.18	17	16.03	17	16.00	British.	Nantilus S. S. Co.	400.4	51.2	24.0	Corral, Chile.	Liverpool, England	6,219 ¹	5,208	3,578
17	7.30	17	8.19	17	17.25	17	17.25	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Philadelphia, Pa.	13,241	9,607	6,551

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Transport

⁸ For dry-docking,

unboat.

Tanker.

13 For orders,
14 Fuel oil and gasoline.

12 Launch.

Motor ship.

a Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or Operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
City of San Francisco ¹⁵ .	17	8.06	17	9.16	17	16.45	American...	Panama Mail S. S. Co.	296.1	45.9	16.3	Buenaventura, Col.	Cristobal, C. Z.	Coffee.	112	3,848	2,606
City of Vancouver ¹⁶ .	17	10.30	17	11.46	17	21.18	British...	Can-Amers. S. S. Co.	411.5	54.1	26.0	Vancouver, B. C.	Leith, Scotland.	Lumber, general.	7,500	6,614	4,995
Bethore ¹⁷ .	16	22.30	17	15.14	18	13.20	American...	Ore S. S. Corp.	550.3	72.2	34.0	Cruz Grande, Chile	New York, N. Y.	Iron ore.	20,669	15,476	4,355
Weeks, No. 75 ¹⁸ .	17	9.30	18	6.40	18	9.11	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Philp, No. 76 ¹⁹ .	17	9.30	18	6.40	18	14.40	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Evans, No. 78 ²⁰ .	17	9.30	18	6.29	18	14.55	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
Hamilton ²¹ .	17	9.30	18	6.29	18	14.55	American...	U. S. Navy	310.0	31.0	9.0	San Diego, Calif.	Hampton Rds., Va.				
No. 141 ²² .	17	9.30	18	6.29	18	14.55	American...	Dimon S. S. Corp.	410.5	54.3	25.0	Seattle, Wash.	Hampton Rds., Va.				
Pacific Pine ²³ .	17	19.45	18	6.25	18	14.50	American...	Amer-Hawaiian Line	407.7	53.7	25.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	7,504	6,583	4,808
Minnesota ²⁴ .	18	3.35	18	7.12	18	15.35	American...	Amer-Hawaiian Line	407.7	53.7	25.0	Portland, Oreg.	Boston, Mass.	General.	6,600	7,150	5,024
Waller A. ²⁵ .	18	6.05	18	7.44	18	16.05	American...	Luckenbach Line.	446.5	56.1	29.0	Portland, Oreg.	Boston, Mass.	(*)	6,990	8,785	6,567
Anna ²⁶ .	18	6.10	18	8.06	18	16.45	Danish...	A. P. Moller	390.6	53.7	26.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	7,656	6,012	4,097
Maersk ²⁷ .	18	6.15	18	11.21	18	18.20	British...	Pacific Steam Nav. Co.	420.5	54.2	26.0	Corral, Chile	Hull, England	General.	6,960	7,139	4,640
Laguna ²⁸ .	18	11.20	18	11.52	18	19.35	British...	H. M. Thomson	412.5	55.5	28.0	Taitai, Chile	Azores ²⁹ .	Nitrates	9,300	6,778	4,837
Bosworth ²⁹ .	18	11.45	18	12.43	18	20.30	American...	Charles Nelson & Co.	386.6	52.2	24.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	6,213	5,699	4,167
American Star. ³⁰ .	18	9.00	18	15.10	18	22.00	American...	U. S. Army	448.0	58.0	24.3	San Francisco, Cal.	Brooklyn, N. Y.	War Dept. gen.	200		
Cambal ³¹ .	18	3.00	19	6.08	19	12.25	American...	Ore S. S. Corp.	550.3	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,150	15,551	4,297
Steelore ³² .	18	12.10	19	6.58	19	12.45	American...	Ore S. S. Corp.	550.3	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,150	15,551	4,297
Venezuela ³³ .	18	23.45	19	7.15	19	17.15	American...	Panama Mail S. S. Co.	380.0	48.7	23.0	San Francisco, Cal.	New York, N. Y.	General.	3,500	6,033	4,353
Acana ³⁴ .	18	23.45	19	7.24	19	17.15	Danish...	East Asiatic Co.	410.0	55.2	29.0	Vancouver, B. C.	Copenhagen, Den.	General.	8,909	7,067	5,285
Calif. ³⁵ .	19	6.00	19	8.12	19	16.25	German...	Roland Line	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	964	1,105	698
Tegema ³⁶ .	19	14.35	19	15.24	19	22.45	British...	Han S. S. Co.	400.1	52.3	25.0	Pimental, Peru	Savannah, Ga.	Sugar.	7,715	5,734	4,080
Norcho ³⁷ .	19	16.00	19	16.52	20	11.20	British...	Freight Corp.	380.0	48.0	23.0	Portland, Oreg.	Savannah, Ga.	Nitrates.	7,900	6,190	4,569
Artemisia ³⁸ .	19	17.00	19	17.32	20	15.10	German...	Freight Corp.	380.0	48.0	23.0	Portland, Oreg.	Savannah, Ga.	Nitrates.	7,900	6,190	4,569
Rochester ³⁹ .	19	12.50	20	6.26	20	14.30	American...	U. S. Navy	384.8	48.0	23.0	Portland, Oreg.	Savannah, Ga.	Nitrates.	4,829	4,701	3,297
Huguenot ⁴⁰ .	19	18.40	20	6.51	20	14.15	American...	Richfield Oil Co.	314.8	36.5	27.0	Corinto, Nicaragua	Cristobal, C. Z.	Ballast.	9,299	7,394	5,099
Salvador ⁴¹ .	19	21.40	20	6.56	20	14.45	American...	Pacific Steam Nav. Co.	915.6	58.5	22.4	Champerico, Guatemala	New York, N. Y.	Gasoline.	154	1,270	735
Darcila ⁴² .	19	21.30	20	7.50	20	15.50	British...	Pacific Steam Nav. Co.	915.6	58.5	22.4	Champerico, Guatemala	New York, N. Y.	Gasoline.	154	1,270	735
Oregon ⁴³ .	20	6.55	20	8.13	20	15.50	French...	Farco Shipping Co.	370.3	50.9	23.0	Taitai, Chile	Azores ²⁹ .	Nitrates	6,400	4,332	3,296
Modavia ⁴⁴ .	20	8.45	20	9.37	20	21.05	French...	Farco Shipping Co.	370.3	50.9	23.0	Taitai, Chile	Azores ²⁹ .	Nitrates	6,400	4,332	3,296
Zealand ⁴⁵ .	19	11.45	30	10.45	20	17.25	British...	Dominion Brothers	357.0	53.7	27.0	Victoria, B. C.	Glasgow, Scotland	General.	5,618	6,719	4,979
David ⁴⁶ .	19	11.45	30	10.45	20	17.25	British...	Shaw, Savill & Albion.	482.6	64.2	25.0	Auckland, N. Z.	London, England	Frozen, general.	5,760	11,819	8,367
Mckelvey ⁴⁷ .	21	2.30	21	6.24	21	14.15	American...	Tidewater Oil Co.	430.0	50.2	25.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	8,586	7,629	5,325
Saramacca ⁴⁸ .	20	15.00	21	6.40	21	15.00	American...	United Fruit Co.	336.7	49.0	26.0	San Francisco, Cal.	Cristobal, C. Z.	General.	497	3,668	2,808
Chetopa ⁴⁹ .	20	20.00	21	7.12	21	14.50	American...	Charles Nelson & Co.	324.0	46.2	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	4,207	3,984	2,628
Virginian ⁵⁰ .	21	4.00	21	7.43	21	15.25	American...	Amer-Hawaiian Line	491.5	58.2	30.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,800	10,491	7,601
* Tanker.																	
* Motor ship. * Destroyer. * Transport.																	
* Cruiser. * For orders. * Lumber, canned goods, and hay. * Fresh fruits and general.																	

Marian Otis Chandler	21	5	40	21	8	36	21	16	50	21	16	50	21	American	Arrow Line	409.6	54.1	24.5	Chemainus, B. C.	Baltimore, Md.	Lumber	7,564	6,653	4,870
Sally	21	9	20	21	10	04	21	17	10	21	18	03	21	Danish	Isbrandtsen Moller Co.	332.1	44.2	22.2	Iloilo, P. I.	Providence, R. I.	Lumber, sugar	4,462	3,518	2,517
Maersk 15	21	9	55	21	10	55	21	18	05	21	18	05	21	British	Shaw, Savill & Albion	477.9	63.0	27.0	Vancouver, B. C.	London, England	General	8,437	11,053	7,835
Matson	21	9	55	21	10	55	21	18	05	21	18	05	21	British	Shaw, Savill & Albion	477.9	63.0	27.0	Vancouver, B. C.	London, England	General	8,437	11,053	7,835
Pacific	21	6	00	21	14	12	21	20	35	21	20	35	21	British	Furness, Withy & Co.	420.0	58.0	26.0	Vancouver, B. C.	Glasgow, Scotland	General	7,110	7,979	5,915
Trader 15	21	15	20	21	16	04	21	22	14	00	22	14	00	Swedish	Che S. S. Corp.	531.1	72.2	35.0	Granada, Chile	Sparrows Pt., Md.	Iron ore	22,144	15,424	4,421
Sweden 15	21	15	20	21	16	04	21	22	14	00	22	14	00	Swedish	Che S. S. Corp.	531.1	72.2	35.0	Granada, Chile	Sparrows Pt., Md.	Iron ore	22,144	15,424	4,421
Santa	21	18	30	21	19	36	21	22	13	15	22	14	05	Spanish	Ora, Maviera Amaza	331.1	48.2	23.0	Talcal, Chile	Azores 19	Nitrates	4,499	3,384	2,098
Langbeek	21	22	45	22	6	50	22	25	16	20	22	16	20	British	F. Carrick & Co., Ltd.	416.0	55.8	24.1	Vancouver, B. C.	Fayal 19	Wheat	8,302	6,671	4,831
Wind Rush	22	3	30	22	8	56	22	16	10	22	16	10	22	American	Shepard S. S. Co.	410.0	54.1	25.0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general	7,750	6,558	4,753
El Chervo 25	21	20	25	21	7	18	22	17	20	22	17	20	22	British	C. T. Bowring & Co.	407.4	45.2	25.2	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	7,520	6,046	4,323
Nosa King	20	9	00	22	7	50	22	18	40	22	22	55	American	N. O. & S. A. S. S. Co.	324.0	46.2	22.1	Corral, Chile	New Orleans, La.	Nitrates, logs	3,800	3,978	2,551	
Armada 15	21	23	50	22	8	48	22	18	55	22	25	15	British	Australand S. S. Co.	413.5	54.2	25.5	Noumea, New Cal	New York, N. Y.	Chromite ore	8,039	6,953	5,210	
Sheaf	22	7	00	22	9	12	22	20	00	22	22	15	Swedish	Knut Knutson	378.6	51.4	24.0	Corral, Chile	London, England	General	7,850	7,128	5,067	
Sheaf Crown	22	2	00	22	10	09	22	20	05	22	22	15	British	W. At. Souter & Co.	405.4	54.3	24.0	New Calelonia	Marshall, France	Ore, copra	6,434	5,498	3,967	
Nareta	21	23	30	22	10	29	21	21	05	23	7	45	British	Royal Mail S. P. Co.	450.2	54.4	23.0	Vancouver, B. C.	Antwerp, Belgium	Fruit, general	5,870	8,856	6,359	
Toha Maru	21	22	30	22	10	58	21	21	23	23	00	05	Japanese	Nippon Yusen Kaisha	445.0	58.0	23.3	Manila, P. I.	Boston, Mass.	General	6,003	8,058	5,743	
Galda 15	22	12	30	22	13	30	22	22	40	22	2	05	Colombian	National Navigation Co.	116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	General	833	211	124	
Santa Maria 15	22	10	30	22	14	05	22	22	40	22	2	05	American	Grace Line	466.0	64.4	24.0	Valparaiso, Chile	New York, N. Y.	General	2,403	10,626	6,850	
Kinkasan Maru	22	13	35	22	14	12	22	23	05	22	23	05	Japanese	Mitsui & Co., Ltd	380.0	53.2	24.0	Portland, Ore	Cobh, Ireland	Wheat	6,630	5,545	3,488	
El Maru	22	13	35	22	14	12	22	23	05	22	23	05	Japanese	Kurehime K. Goshi K.	385.0	51.9	25.0	Portland, Ore	Dublin, Ireland	Wheat	6,800			

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
November 16.	Pastores.	United Fruit Co.	Port Limon, Costa Rica.	November 16.	No. 300-N ²²	Pan American-Grace Airways.	Talara via waypoints.
November 17.	Genevieve Lykes.	Horatio Stevenson.	Manzanillo, Cuba.	November 16.	No. 9685 ²²	Pan American Airways.	San Salvador and waypoints.
November 17.	Garcia.	Hamburg-American Line.	Hamburg via waypoints.	November 16.	No. 9776 ²²	Pan American Airways.	Miami via waypoints.
November 17.	Ulla.	United Fruit Co.	New York via Habana.	November 16.	Costarica.	Royal Netherlands S.S. Co.	Amsterdam and waypoints.
November 17.	Darien C-35 ²²	Scottia Airplane Co.	Barranquilla, Colombia.	November 16.	Pastores.	United Fruit Co.	New York via Habana.
November 17.	Wauna.	Standard Fruit & S. S. Co.	Puerto Cabezas.	November 17.	Pearl Marie ²³	G. I. Bryan.	Bluefields, Nicaragua.
November 17.	Pearl Marie ²³	Pan American Airways.	San Salvador and waypoints.	November 17.	Garcia.	Hamburg-American Line.	Port Limon, Costa Rica.
November 17.	Cristobal.	Panama R. R. S. S. Line.	Colon, R. P.	November 18.	Genevieve Lykes.	Horatio Stevenson.	Manzanillo, Cuba.
November 19.	Arguani.	Elders & Fyffes Line.	New York via Haiti.	November 19.	No. 9670 ²²	Pan American Airways.	San Salvador and waypoints.
November 19.	Sxaala.	United Fruit Co.	Armonmouth via waypoints.	November 19.	No. 9137 ²²	Pan American Airways.	Miami via waypoints.
November 19.	Tela.	United Fruit Co.	New Orleans, La.	November 19.	Ulla.	United Fruit Co.	Port Limon, Costa Rica.
November 19.	No. 9685 ²²	Pan American Airways.	San Salvador and waypoints.	November 19.	Arguani.	Elders & Fyffes Line.	Armonmouth via waypoints.
November 19.	No. 9776 ²²	Pan American Airways.	Miami via waypoints.	November 20.	No. 149-M ²²	Pan American-Grace Airways.	Talara via waypoints.
November 20.	Cefahi.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	November 20.	Sxaala.	United Fruit Co.	Guayaquil, D. W. I.
November 21.	United Fruit Co.	United Fruit Co.	New Orleans and waypoints.	November 20.	Denver ²⁵	United Fruit Co.	New York and waypoints.
November 22.	Soua.	United Fruit Co.	Bocas, Rep. of Panama.	November 20.	Tela.	United Fruit Co.	Guantanamo, Cuba.
November 22.	Bolivar.	Colombian S. S. Co.	New York via waypoints.	November 20.	Anachucuna ²⁴	United Fruit Co.	Bocas, Rep. of Panama.
November 22.				November 21.	No. 9688 ²²	Pan American Airways.	San Salvador and waypoints.

²² Air mail carrier.²³ Motor schooner.²⁴ Motor boat.²⁵ Cruiser.

* Other than ships passing through the Canal.

(Continued on next page, column 2.)

Official Circulars.

Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 22, 1930.

To all concerned.—Effective November 24, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., Engineer of Maintenance, will act as Governor.

H. BURGESS,
Governor.

Duties of President of Panama Railroad Company.

PANAMA RAILROAD COMPANY,
PANAMA RAILROAD STEAMSHIP LINE,
BALBOA HEIGHTS, C. Z., November 22, 1930.

To all concerned.—Effective November 24, 1930, and during my absence from the Isthmus, Lieut. Col. J. L. Schley, U. S. A., 2d Vice President, will perform such duties of the President as relate to the operations of the Company on the Isthmus.

H. BURGESS,
President.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$8 per ton of 2,240 pounds at Cristobal, and \$11 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services. Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 251.

PORT OF CRISTOBAL.—Continued.				* DEPARTURES.		
* ARRIVALS.		From—		Date.	Vessel.	Line.
November 22	Juan Sebastian	Barcelona via wayports,	November 21	N. R. 101-W ²⁸	Pure Oil Co.	Chicago via wayports.
November 22	Eleono	La Guayra via wayports,	November 21	Darlen C-35 ²⁶	Sadta Airplane Co.	Barraquilla and waypts.
November 22	No. 145-M ²⁶	Pan American Airways	November 22	Tela	United Fruit Co.	New Orleans and waypts.
November 22	No. 945-M ²⁶	Pan American-Graee Airways	November 22	Cefalu	Standard Fruit & S. S. Co.	New Orleans and waypts.
November 22	No. 142-M ²⁶	Miami via wayports.	November 22	Sosua	United Fruit Co.	New Orleans, La.
November 22	No. 9970 ²⁶	San Salvador and waypts.	November 22	Amnetta I. ²⁷	A. Tagaropoulos	Colon, Rep. of Panama.
November 22	Amnetta I. ²⁷	Colon, Rep. of Panama.				
PORT OF BALBOA.				* ARRIVALS.		
November 21	Dos Hermanos ²⁹	Panama Bay, R. P.	November 21	Dos Hermanos ²⁹	A. Valdez	Panama Bay, R. P.
November 21	Real ²⁹	Panama Bay, R. P.	November 21	Real ²⁹	Hans Elliot	Panama Bay, R. P.
November 21	Sambu ²⁹	Panama Bay, R. P.	November 21	Sambu ²⁹	Hans Elliot	Panama Bay, R. P.

* Other than ships passing through the Canal.

²⁶ Air mail carrier. ²⁷ Motor boat. ²⁸ Airplane.

²⁹ Motor schooner.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
The Panama Canal Record, Balboa Heights, Canal Zone, or
The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 3, 1930. No. 18.

Canal Traffic During November.

During the month of November, 1930, 479 commercial vessels and 4 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,098,357.36, and on the launches \$20.22, or a total tolls collection of \$2,098,377.58.

The daily average of commercial vessels was 15.96, and the average tolls collection was \$69,945.25, as compared with an average of 16.68 transits and \$73,838.13 in tolls for the previous month, and an average of 17.5 transits and \$74,829.96 in tolls for November, 1929. The average amount of tolls paid by each of the commercial transits was \$4,380.70, as compared with \$4,427.43 for the month of October, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current calendar year, with the daily averages of transits and tolls, and the totals for the first 11 months of the calendar years 1929 and 1928:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
Total, first 11 months of calendar year, 1930.....	5,390	23,953,441.11	16.14	71,716.89
Total, first 11 months of calendar year, 1929.....	5,908	25,283,713.94	17.69	75,669.74
Total, first 11 months of calendar year, 1928.....	5,755	23,932,933.02	17.18	71,441.59

As compared with the first 11 months of the calendar year 1929, the corresponding period this year has had 518 fewer transits and \$1,330,272.83 less tolls.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 24, 1930.

No. 808.

Panama, west coast, South Frailes Island light, visibility lessened. Since being changed from flashing white to flashing red (see Notice to Mariners No. 799, Balboa Heights, November 14, 1930), the visibility of South Frailes Island light has been lessened from 15 miles to about 10 miles. Navigators should bear this in mind when trying to sight the light.

J. L. SCHLEY,
Acting Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, November 29, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or Operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Pendone ^{1 2}	23	6.40	23	6.55	23	14.05	Danish	W. Tankership Rhederei	470.0	63.0	19.0	Hamburg, Germany	Talara, Peru.	Ballast.		8,939	6,127
Pacific Spruce.	23	8.15	23	8.20	23	16.02	American	Round S. S. Corp.	410.5	54.0	17.6	Philadelphia, Pa.	Seattle, Wash.	General	3,544	6,624	4,757
Swedish	19	16.25	23	10.00	23	16.26	American	Dimond Line	216.5	32.9	12.3	Charleston, C. Z.	Guayaquil, Ecuador	General	234	1,105	698
Bonier ^{1 2}	23	9.45	23	10.40	23	17.48	British	Anglo-Saxon Pet. Co.	426.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		7,149	4,927
Corinthian	23	4.30	23	13.30	23	20.55	British	Shaw, Savill & Albion.	500.3	63.3	26.7	London, England.	Wallington, N. Z.	General	4,153	12,821	9,507
Chim	23	20.15	23	6.15	23	13.05	American	George Westinghouse	398.5	53.8	20.0	Cincinnati, C. Z.	Gatun, C. Z.	Ballast.		4	
Plum Branch	23	6.55	24	7.15	24	15.45	British	F. & W. Tutson.	309.7	70.3	23.0	No. Shields, Eng.	Corral, Chile.	General	3,600	5,761	3,881
Australia ^{1 2}	24	6.55	24	7.15	24	15.45	American	The Texas Co.	309.7	70.3	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		12,514	8,427
Malaga	24	8.05	24	8.20	24	15.39	American	Luckenbach Line.	434.3	57.7	22.3	Mobile, Ala.	Tuacama, Wash.	General	5,963	7,977	5,764
Thyra	24	4.05	24	10.40	24	18.24	Norwegian	William Hansen	270.0	38.0	17.6	Tampico, Mexico.	Liquique, Chile.	Asphalt.	2,101	1,910	1,192
Norumber	25	00.55	25	6.20	25	14.05	British	Federal Steam Nav. Co.	550.0	63.0	30.3	Falmouth, England	N. Plymouth, N. Z.	General	8,438	13,268	9,124
Marick ^{1 2}	24	22.50	25	7.30	25	14.28	Swedish	Traktobolaget	392.0	52.6	17.8	New York, N. Y.	Arica, Chile.	Ballast.		5,764	4,078
Ferdale ^{1 2}	25	3.15	25	8.30	25	15.41	Norwegian	Fern Line	382.7	58.4	16.7	New Orleans, La.	Los Angeles, Calif.	Ballast.		6,082	4,222
Movera ^{1 2}	24	18.30	25	1.05	25	17.51	British	Donaldson Brothers.	385.6	51.6	17.7	Glasgow, Scotland	Vancouver, B. C.	General, bananas	651	6,576	4,724
Spencer	25	8.30	25	14.00	25	21.25	German	Hamburg-American Line	400.0	54.6	19.9	Hamburg, Germany	Valparaiso, Chile.	General	2,798	6,791	4,997
Alandun	25	6.30	26	6.00	26	14.14	Dutch	Royal Neth. S. S. Co.	473.5	65.6	22.0	Hamburg, Germany	Corral, Chile.	General	4,138	11,638	7,744
Castle ^{1 2}	25	18.40	26	6.15	26	15.01	British	Barber S. S. Line	464.6	60.3	24.7	New York, N. Y.	Yokohama, Japan	Gen., case oil	6,223	8,805	6,035
Silva willow	25	21.30	26	7.20	26	15.06	British	Kerr S. S. Co.	450.0	61.0	24.0	New York, N. Y.	Shanghai, China.	General	6,420	9,311	6,524
Eagle ^{1 2}	25	23.00	26	7.35	26	15.43	American	Standard Oil Co.	410.0	56.0	20.6	New York, N. Y.	Los Angeles, Calif.	Ballast.		8,201	6,226
Democracy	26	1.05	26	5.30	26	10.25	American	Nelson Line	377.0	52.0	18.6	New York, N. Y.	Seattle, Wash.	General	3,289	5,434	3,969
Katrina	26	4.00	26	9.24	26	16.32	American	Luckenbach Line	445.0	56.0	24.1	New York, N. Y.	Seattle, Wash.	General	3,817	8,508	6,179
India Arrow ^{1 2}	26	6.20	26	9.55	26	17.36	American	Standard Transp. Co.	488.3	62.7	21.0	Boston, Mass.	Los Angeles, Calif.	Ballast.		10,084	7,388
Santa Clara.	26	4.15	26	13.27	26	20.47	American	Price Line	368.3	63.3	24.0	New York, N. Y.	Valparaiso, Chile.	General	2,767	11,680	7,442
Pueblo ^{1 2}	26	13.25	26	14.10	26	22.02	American	Refined Oil Co.	241.0	49.6	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast		4,613	2,996
Oreida	26	13.25	26	14.10	26	22.02	American	Port Motor Co.	231.0	48.6	18.0	Chesler, Pa.	San Francisco, Cal.	Auto. parts	2,246	2,626	1,921
Salie	26	13.45	26	15.25	26	23.07	Norwegian	Chilean Nitrate Co.	412.8	59.1	18.6	Norfolk, Va.	Arica, Chile.	Ballast		8,580	6,246
Biscaya ^{1 2}	26	16.55	26	19.40	26	23.07	German	Anglo-Amer. Oil Co.	412.8	59.1	18.6	Glasgow, Scotland	Los Angeles, Calif.	Ballast		6,585	4,435
Washington	26	8.45	27	6.05	27	13.50	French	Freuch Line	470.0	58.6	20.0	Havre, France.	Unconover, B. C.	General	3,358	10,332	7,475
Nevadan	26	22.55	27	6.20	27	14.27	American	Amer.-Asian Line.	470.0	58.6	20.0	Boston, Mass.	Seattle, Wash.	General	1,684	6,829	4,627
Texmar	26	22.55	27	7.15	27	14.30	American	Calmor S. S. Corp.	404.6	54.6	26.0	Baltimore, Md.	Seattle, Wash.	Steel, general	5,576	6,597	4,869
Santa Cecilia	27	4.10	27	7.15	27	14.45	American	Tugboat S. S. Line.	434.4	58.2	18.0	Baltimore, Md.	Tuacama, Wash.	Steel, general.	7,765	9,743	7,582
Paul Shop ^{1 2}	27	5.00	27	8.45	27	15.43	American	Tugboat S. S. Line.	434.4	58.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast.		7,333	5,582
Nesa Prince.	27	17.50	27	9.35	27	16.33	American	N. O. & S. S. S. Co.	324.0	46.0	18.8	New Orleans, La.	Talcahuano, Chile.	General.	2,757	3,983	2,570

¹ Launch.² Motor ship.³ Tanker.

West Ivis.....	27	6.35	27	9.50	27	16.55	27	21.07	American.....	McCormick S. S. Co.....	410.0	54.2	16.0	Bahia Blanca, Arg.	Los Angeles, Calif.	General.....	1,542	6,754	4,967
Nagara.....	27	5.45	27	18.05	27	19.15	27	21.15	British.....	Royal Mail S. P. Co.....	430.0	61.0	21.0	Newport, England.	Seattle, Wash.	Ballast.....	9,446	6,085	
Nore s.....	27	17.40	27	20.00	28	9.50	28	13.30	Norwegian.....	Anglo-Saxon Pet. Co.....	460.0	59.0	18.6	New York, N. Y.	Los Angeles, Calif.	Ballast.....	8,297	5,572	
Chaumont s.....	27	6.20	28	5.58	28	14.05	30	9.06	American.....	U. S. Navy.....	436.0	58.2	24.4	Hampton Rds., Va.	Manila, P. I.	General.....	514		
California.....	28	6.35	28	7.20	28	15.09	29	00.25	American.....	Panama-Pacific Line.....	574.4	80.3	26.0	New York, N. Y.	San Francisco, Cal.	General.....	3,016	24,506	17,565
President.....	28	7.00	28	7.40	28	15.09	28	21.35	American.....	Dollar Line.....	502.0	62.0	26.0	New York, N. Y.	San Francisco, Cal.	General.....	3,307	12,618	9,251
Algonquin.....	27	20.05	28	8.35	28	16.02	28	17.10	American.....	Standard Transp. Co.....	435.0	56.0	17.6	New York, N. Y.	Los Angeles, Calif.	Ballast.....	7,602	5,837	
Birchbank s.....	28	00.30	28	8.40	28	16.49	28	18.15	British.....	Andrew Weir & Co.....	420.0	54.0	24.6	Tampa, Florida.	Yokohama, Japan.	General.....	7,376	7,137	5,054
Dalrymple.....	28	00.10	28	9.50	28	17.01	28	18.40	British.....	Campbell Bros.....	405.0	53.0	17.0	Newcastle, Eng.	San Francisco, Cal.	Ballast.....	6,161	4,559	
R. J. Hanna s.....	28	3.00	28	10.00	28	17.36	28	19.15	American.....	Standard Oil Co.....	435.0	56.2	21.6	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.....	7,639	5,135	
City of Delhi.....	28	5.15	28	10.40	28	18.35	28	23.35	British.....	George Smith & Sons.....	435.0	58.4	23.0	New York, N. Y.	Durand, N. Z.	General.....	1,862	9,478	7,069
San Francisco.....	28	13.10	28	13.25	28	22.03	29	2.44	Japanese.....	Kokusai Kisen Kaisha.....	385.0	51.0	23.6	Tampa, Florida.	Yokohama, Japan.	(s)	6,144	6,213	4,674
Maru.....	28	22.40	28	14.05	28	22.03	30	14.15	Colombian.....	National Navigation Co.....	116.0	21.0	7.10	Cristobal, C. Z.	Buenaventura, Col.	General.....	150	211	124
Caldas s.....	28	11.05	29	6.10	29	14.04	30	18.00	British.....	Royal Mail S. P. Co.....	485.6	62.3	21.6	Rotterdam, Holl'd	Portland, Ore.	Gen., bananas	2,140	1,803	7,606
Lothgal s.....	28	2.55	29	10.15	29	17.30	29	18.35	American.....	Quaker Line.....	410.0	54.4	16.2	Philadelphia, Pa.	Seattle, Wash.	General.....	2,921	6,484	4,674
San Rafael.....	29	11.20	29	11.25	29	18.48			Dutch.....	Anglo-Saxon Pet. Co.....	406.5	51.4	27.0	Curacao, D. W. I.	Los Angeles, Calif.	(s)	7,329	5,971	4,108
Mitra s.....	29	16.45	29	17.10	30	9.02	30	10.06	American.....	Amer-Hawaiian Line.....	414.5	53.7	18.0	Boston, Mass.	Portland, Ore.	General.....	2,610	7,049	4,941
Kentuckian.....	29	16.45	29	17.10	30	9.02	30	10.06	American.....	Amer-Hawaiian Line.....	414.5	53.7	18.0	Boston, Mass.	Portland, Ore.	General.....	2,610	7,049	4,941

* Gas oil to be discharged at Balboa.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

s Phosphate and cotton.

t Transport.

s Tanker.

Spindilus s.....	21	22.15	23	6.04	23	14.10	23	16.30	British.....	Anglo-Saxon Pet. Co.....	460.4	59.5	27.1	Los Angeles, Calif.	Curacao, D. W. I.	Gasoline.....	8,855	7,915	4,797
Dixie Arrow s.....	23	5.00	23	6.54	23	15.25	23	17.45	American.....	Standard Transp. Co.....	443.3	62.7	27.4	Los Angeles, Calif.	New York, N. Y.	Gasoline.....	11,220	9,744	7,140
Robador.....	20	9.30	23	7.20	23	14.15	23	14.15	Panama.....	Carissima S. S. Co.....	169.3	28.1	10.0	Long beach, Calif.	Miami, Florida.	Ballast.....	608	242	
Wearpool.....	19	21.25	23	7.45	23	17.00	23	18.50	British.....	Pool Shipping Co., Ltd.....	390.0	55.5	24.0	Vancouver, B. C.	Avonmouth, Eng.	Wheat.....	7,910	5,920	4,318
Nurtleton.....	23	5.00	23	8.05	23	17.05	23	17.05	British.....	R. Chapman & Sons.....	423.0	58.4	26.0	Vancouver, B. C.	London, England.	Wheat.....	5,908	6,854	4,746
Krysanthi.....	23	7.45	23	8.46	23	17.45	23	21.05	Greek.....	N. Pateras & Sons.....	365.0	50.6	25.2	Antofagasta, Chile.	Azores s.....	Nitrates.....	7,000		
Patera.....	23	11.25	23	12.41	23	20.10	23	21.10	British.....	Norton, Lilly & Co.....	400.2	52.2	25.2	Iquique, Chile.	New York, N. Y.	Nitrate of soda.....	7,612	6,085	4,342
Treven.....	23	12.25	23	13.06	23	20.35	23	20.35	American.....	Standard Transp. Co.....	439.5	58.0	29.4	Los Angeles, Calif.	New York, N. Y.	Gas oil.....	10,304	8,913	6,210
Astral s.....	23	12.40	23	13.37	23	21.00	23	21.00	American.....	Redwood Line.....	386.8	52.2	20.0	Seattle, Wash.	New Orleans, La.	Logs, general.....	5,016	5,696	4,125
Island.....	23	15.25	23	15.56	23	22.35	23	22.35	British.....	Reardon, Smith Line.....	415.6	55.5	25.0	Vancouver, B. C.	Manchester, Eng.	General.....	6,946	7,272	5,494
City s.....	23	17.07	23	17.50	24	11.50	25	00.40	British.....	San Nat. Steamships.....	429.3	52.4	21.0	Melbourne, Aust'lia	Halifax, N. S.	General.....	5,526	5,891	4,114
Atlantic Sun s.....	23	16.07	24	6.32	24	13.50	24	14.30	American.....	Can. Oil Co.....	400.3	59.2	25.0	New York, N. Y.	New York, N. Y.	General.....	9,210	7,567	5,283
Damsterdijk s.....	24	10.45	24	11.30	24	18.10	24	20.05	Dutch.....	Holland-American Line.....	502.2	64.6	30.0	Vancouver, B. C.	Rotterdam, Holl'd	Wheat, general.....	9,584	11,721	8,351
San Teresa.....	24	15.10	24	16.20	24	22.40	25	4.50	American.....	Grace Line.....	360.2	51.6	19.0	Talcahuano, Chile.	New York, N. Y.	General.....	2,321	5,726	4,086
Virginia.....	24	11.45	25	6.12	25	13.25	25	14.25	American.....	Panama-Pacific Line.....	586.4	80.3	29.0	San Francisco, Cal.	New York, N. Y.	General.....	5,657	25,254	18,170
Greenlock.....	24	21.50	25	7.05	25	14.53	25	14.53	American.....	Seas Shipping Co.....	430.7	54.3	28.0	Seattle, Wash.	Newark, N. J.	Lumber, general.....	7,403	7,946	5,698
Dorothy.....	24	17.00	25	7.09	25	14.15	25	14.55	American.....	Luckenbach Line.....	448.9	60.2	29.0	Portland, Ore.	Boston, Mass.	Lumber, general.....	7,400	9,294	6,861
Thodore.....	24	22.30	25	8.01	25	16.35	25	19.15	Norwegian.....	Fred Olsen & Co.....	425.5	55.2	28.5	Vancouver, B. C.	London, England.	Wheat, general.....	8,974	7,593	5,637
Rosevelt s.....	24	22.30	25	8.07	25	15.25	25	15.25	American.....	Luckenbach Line.....	434.2	57.7	23.0	Seattle, Wash.	Mobile, Ala.	General.....	4,440	7,982	5,922
Jack.....	25	2.47	25	8.45	25	16.40	25	16.40	American.....	Amer-Hawaiian Line.....	404.6	53.9	26.0	Portland, Ore.	Boston, Mass.	General.....	4,624	6,777	4,761

s For orders.

t Motor ship.

s Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
Portmar	25	6 20	25	9 35	25	17 50	25	17 50	American.	Calmar S. S. Corp.	409.8	54.2	25.4	Olympia, Wash.	Baltimore, Md.	Lumber	7,586	6,581	4,795
Point Arena	25	10 26	25	11 06	25	18 25	25	18 25	American.	Swayne & Hoyt.	324.0	45.0	18.1	Portland, Oreg.	New Orleans, La.	General	2,428	3,984	2,612
El Lobo	25	14 30	25	19 26	11 26	11 10	26	11 10	British.	C. P. Bowring & Co.	385.2	51.0	23.0	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil	6,088	4,851	3,326
Macroe	26	4 49	26	6 10	26	15 40	26	15 40	American.	Ore S. S. Corp.	530.3	72.2	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,161	15,551	4,297
Teno	25	20 35	26	5 37	26	14 25	26	17 40	Chilean.	Clas. Sud. Amer. de Vap.	422.8	56.2	25.0	Talcahuano, Chile	New York, N. Y.	General	3,686	7,764	4,672
Vancouver	25	17 45	26	7 29	26	16 55	26	21 40	German.	Hamburg-American Line	477.5	63.1	28.0	Vancouver, B. C.	Hamburg, Germany	General	8,701	10,267	7,252
S-10	26	8 07	26	17 50	26	17 50	26	17 50	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
S-11	26	8 07	26	17 50	26	17 50	26	17 50	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Asheville	26	8 11	26	19 20	26	19 30	26	19 30	American.	U. S. Navy	225.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Primer	26	2 00	26	8 19	26	19 30	26	19 30	Norwegian.	Moore & McCormack	388.5	53.7	23.3	N. Westin ster, B. C.	Boston, Mass.	Lumber	6,600	5,704	4,273
S-12	26	9 00	26	17 50	26	17 50	26	17 50	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
S-13	26	9 00	26	17 50	26	17 50	26	17 50	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Dorothy Cahill	26	6 42	26	9 02	26	19 45	26	20 50	American.	Arrow Line.	410.0	54.2	24.0	Willapa Har., Wash	New York, N. Y.	Lumber	7,072	6,579	4,810
Bengloe	26	9 40	26	10 06	26	20 40	26	22 05	British.	Ben Line Steamers, Ltd.	405.0	52.6	25.0	Vancouver, B. C.	Wheat, general	7,635	5,870	4,359	
Kitty Taylor	26	3 00	26	12 34	26	22 10	27	1 53	British.	Lambert Bros., Ltd.	335.0	53.6	25.0	Iquique, Chile.	Nitrates	8,050	6,115	4,466	
Tai Yang	26	3 00	26	12 34	26	22 10	27	1 53	Norwegian.	Barber Wilhelmsen Line	461.4	69.6	23.0	Davao, P. I.	General	4,118	10,009	7,075	
Trojan Star	25	23 00	26	15 36	27	10 55	27	10 55	British.	Blue Star Line	473.0	60.0	23.0	Vancouver, B. C.	General	6,300	10,405	7,401	
Ulmosa	26	21 45	27	6 10	27	13 40	27	13 45	American.	The Texas Co.	416.8	56.1	25.0	Los Angeles, Calif	(*)	7,433	6,943	5,032	
Napier Star	26	21 00	27	6 50	27	14 39	27	15 55	British.	Blue Star Line	476.8	57.3	25.0	Seattle, Wash.	Frozen, general	5,279	11,635	7,751	
William A. McKenney	26	24 00	27	7 18	27	15 15	27	15 15	American.	Mystic S. S. Co.	395.0	55.1	28.0	Portland, Oreg.	Wilmington, Del.	Lumber	7,900	6,993	5,099
Rangitata	26	20 50	27	8 15	27	15 45	27	15 45	British.	N. Z. Shipping Co.	531.0	70.2	28.0	Auckland, N. Z.	London, England	Frozen, general	6,537	18,206	13,500
Alkmar	27	7 00	27	8 40	27	16 40	27	21 45	Dutch.	Royal Neth. S. S. Co.	447.2	52.7	28.0	Corral, Chile.	Amsterdam, Holland	General	10,797	9,508	6,644
Srestad	27	12 45	27	13 40	27	21 30	28	1 00	Norwegian.	A. F. Klaveness & Co.	377.6	53.2	25.0	Witvalla, Australia	New York, N. Y.	Iron ore	6,851	6,079	4,534
Kaloudo	27	15 15	27	15 55	28	8 55	28	8 55	Greek.	Georges M. Assinomit	389.8	54.3	26.0	Antofagasta, Chile	Azores	Nitrates	7,640	5,801	3,877
Lebore	28	3 45	28	7 15	28	15 40	28	15 40	American.	Ore S. S. Corp.	349.6	52.2	25.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,500	14,325	4,635
Kalfari	27	23 45	28	7 00	28	15 50	28	15 50	Norwegian.	M. D. Steen.	429.0	53.6	29.0	Vancouver, B. C.	Hull, England	Lumber, general	8,500	7,057	5,063
Riverton	28	2 00	28	7 32	28	16 35	28	16 35	British.	R. Chapman & Son.	416.5	54.0	24.4	Vancouver, B. C.	London, England	Wheat	7,964	5,761	4,129
Manzales	28	7 30	28	8 55	28	18 35	29	1 00	German.	Roland Line.	299.0	32.9	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	603	1,132	741
Orduña	28	1 00	28	9 36	28	18 35	29	1 00	British.	Pacific Steam Nav. Co.	599.0	97.0	30.0	Talcahuano, Chile	Liverpool, England	Lumber, general	7,634	8,567	6,020
Mission	28	11 10	28	10 26	28	19 30	28	19 30	American.	Amer.-Hawaiian Line	445.1	34.4	13.0	Tacoma, Wash.	Boston, Mass.	General	482	1,632	1,041
Durazzo	28	10 35	28	14 04	28	20 30	29	0 15	German.	Hamburg-American Line	227.5	32.6	16.0	Vancouver, B. C.	Stockholm, Sweden	General	5,374	6,650	4,919
Anded Johnson	28	10 35	28	14 04	28	20 30	29	0 15	Swedish.	Johnson Line	327.0	32.6	16.0	Vancouver, B. C.	Azores	Wheat, general	5,374	6,650	4,919
Orgo Slavija	28	18 10	28	19 27	29	11 40	29	13 35	Yugoslav.	Baburizza & Co.	410.1	49.3	26.0	Antofagasta, Chile	Azores	Nitrate of soda	7,660	5,086	4,188
Willopzo	28	18 50	28	19 37	29	11 40	29	13 35	American.	Williams S. S. Corp.	415.1	55.7	27.0	Seattle, Wash.	Baltimore, Md.	Lumber, g. neral	10,350	7,731	5,806
Amun	28	6 30	29	6 39	29	13 45	29	20 30	British.	Anglo-Saxon Pet. Co.	420.0	54.0	27.0	Los Angeles, Calif	Land's End, Eng.	Gasoline	8,006	6,645	4,843
San Salvador	28	7 20	29	6 39	29	13 45	29	14 45	British.	Anglo-Mexican Pet. Co.	407.0	52.4	25.0	Los Angeles, Calif	Lizards, Eng.	Gasoline	6,762	6,157	4,137
K. R.	28	18 30	29	7 15	29	15 10	29	15 10	American.	Standard Oil Co. of Cal.	440.0	58.2	28.1	Los Angeles, Calif	Paulsboro, N. J.	Gasoline	9,350	9,033	5,938
Kingsbury	28	19 30	29	7 15	29	15 10	29	15 10	American.	Standard Oil Co. of Cal.	440.0	58.2	28.1	Los Angeles, Calif	Paulsboro, N. J.	Gasoline	9,350	9,033	5,938
Tanker.																			

* Chilled fruit and general.

* For orders.

* Gunboat.

* Motor ship.

* Submarine.

* Tanker.

Pat Doheny ¹	28 19 50 29	7 37 29	16 05 29	16 05 29	American	Richfield Oil Co. of Cal.	430 0	59 2	28 0	Los Angeles, Calif.	Perth Amboy, N.J.	Gasoline	9, 140	7, 773	5, 634
Mission ²	28 23 30	29 8 21	29 17 15	29 21 15	German	Hamburg-American Line	490 7	57 2	25 0	Pro. Montt, Chile	Hamburg-Germany	General	8, 712	7, 684	5, 234
Mallard ³	29 8 30	29 16 00	29 16 00	29 16 00	American	U. S. Navy	187 0	35 6		Balboa, C. Z.	Cristobal, C. Z.	Ballast			
Themisto ⁴	29 5 30	29 8 41	29 17 20	29 17 20	Dutch	Hud & Veder	400 5	55 0	25 0	Antofagasta, Chile	Azores ¹²	Nitrate of s.d.	7, 850	6, 622	4, 404
Sunol ⁵	29 8 25 29	9 13 29	17 50 29	17 50 29	American	Sun Oil Co.	480 6	66 0	29 0	Los Angeles, Calif.	Chester, Pa.	Gasoline	13, 626	9, 619	6, 456
Cauca ⁶	29 15 40 29	16 50 29	23 25 30	19 05 29	Colombian	National Navigation Co.	107 0	22 9	9 0	Buenaventura, Col.	Cristobal, C. Z.	(¹⁵)	53	238	163

¹ Tanker. ¹⁴ Tug. ¹⁵ Coffee, machinery, and gold.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

ARRIVALS.					DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
November 23.....	Ulua	United Fruit Co.	Port Limon, Costa Rica.	November 23.....	No. 9085 ¹⁶	Pan American Airways	San Salvador and waypts.		
November 23.....	Swiftscout.	Asiatic Petroleum Corp.	Curacao, D. W. I.	November 23.....	No. 9776 ¹⁶	Pan American Airways	Miami via waypts.		
November 24.....	Calamares	United Fruit Co.	New York via Habana.	November 23.....	Ulua	Colombian S. S. Line	New York via Kingston.		
November 24.....	Darien C-35 ¹⁶	Scadta Airplane Co.	Barranquilla, Colombia.	November 23.....	Bolivar	United Fruit Co.	New York via Habana.		
November 25.....	No. 9688 ¹⁶	Pan American Airways	San Salvador and waypts.	November 23.....	Cristobal	Panama R. R. S. S. Line	New York via Haiti.		
November 25.....	Simon Bolivar	Royal Neth. S. S. Co.	Hambrg via waypts.	November 24.....	Swiftscout	Asiatic Petroleum Co.	Curacao, D. W. I.		
November 25.....	Cuba	French Line	Havre via waypts.	November 25.....	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.		
November 26.....	No. 945-M ¹⁴	Pan American-Grace Airways	Talara via waypts.	November 26.....	Calamares	United Fruit Co.	Port Limon, Costa Rica.		
November 26.....	Zacapa	Hamburg-American Line	New York via Kingstons.	November 26.....	Juan Sebastian Elcano	Spanish S. S. Line	Barcelona and waypts.		
November 26.....	Magdalena	United Fruit Co.	Hamburg via waypts.	November 26.....	No. 9688 ¹⁶	Pan American Airways	San Salvador and waypts.		
November 26.....	Iriona	United Fruit Co.	New Orleans, La.	November 26.....	Magdalena	Hamburg-American Line	Miami via waypts.		
November 27.....	Darien	Pan American Airways	Liverpool via waypts.	November 27.....	Iriona	Pan American Airways	Port Limon, Costa Rica.		
November 27.....	No. 9137 ¹⁶	Pan American Airways	Miami via waypts.	November 27.....	Zacapa	United Fruit Co.	New York via waypts.		
November 28.....	Picurin N.C. 214-H ¹⁶	Richard Light	Kalamazoo via waypts.	November 27.....	No. 309-N ¹⁶	Pan American-Grace Airways	Talara via waypts.		
November 28.....	Anapala	Standard Fruit & S. S. Co.	New Orleans and Habana.	November 27.....	No. 300-N ¹⁶	Pan American-Grace Airways	Talara via waypts.		
November 28.....	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	November 28.....	Darien C-35 ¹⁶	Scadta Airplane Co.	Barranquilla & Cartagena.		
November 28.....	Annetta I. ¹⁷	A. Tagaropolos	Colon, Rep. of Panama.	November 28.....	Cuba	French Line	Havre via waypts.		
November 29.....	Genevieve Lykes	H. Stevenson	Manzanillo, Cuba.	November 28.....	Darien	Pan American Airways	Port Limon, Costa Rica.		
November 29.....	Magdalena	Hamburg-American Line	Port Limon, Costa Rica.	November 28.....	No. 9670 ¹⁶	A. Tagaropolos	San Salvador and waypts.		
November 29.....	Iriona	United Fruit Co.	Colon, Rep. of Panama.	November 28.....	Annetta I. ¹⁷	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.		
November 29.....	Inapaquina ¹⁷	A. Tagaropolos	Colon, Rep. of Panama.	November 29.....	Annetta I. ¹⁷	Standard Fruit & S. S. Co.	New Orleans and waypts.		
November 29.....	Annetta I. ¹⁷	A. Tagaropolos	Colon, Rep. of Panama.	November 29.....	Simon Bolivar	Royal Netherlands S. S. Co.	Asterdam and waypts.		
November 29.....	Barcos	G. I. Bryan	Colon, Rep. of Panama.	November 29.....	Pearl Marie ¹⁸	G. I. Bryan	Bluefields, Nicaragua.		
November 29.....	No. 309-N ¹⁶	Pan American Airways	New York via waypts.	November 29.....	Barcos	Colombian S. S. Line	New York via waypts.		
November 29.....	No. 9776 ¹⁶	Pan American-Grace Airways	La Guayra via waypts.	November 29.....	Anachucuna ¹⁷	United Fruit Co.	Colon, Rep. of Panama.		
November 29.....	No. 9688 ¹⁶	Pan American Airways	Miami via waypts.	November 29.....	Inapaquina ¹⁷	A. Tagaropolos	Colon, Rep. of Panama.		
November 29.....	No. 9688 ¹⁶	Pan American Airways	San Salvador and waypts.						

¹⁶ Air mail carrier. ¹⁷ Motor boat. ¹⁸ Motor schooner.

PORT OF BALBOA.

November 17.....	Incalite ¹⁸	Imperial Oil Co., Ltd.	Callao, Peru.	November 27.....	Incalite ¹⁸	Imperial Oil Co., Ltd.	Talara, Peru.
November 17.....	Frost ¹⁹	West India Oil Co.	Talara, Peru.	November 29.....	Frost ¹⁹	West India Oil Co.	Talara, Peru.

¹⁹ Motor ship.

* Other than ships passing through the Canal.

(Continued on page 268, column 2.)

Commercial Traffic Through the Panama Canal During the Fiscal Year 1930, by Principal Trade Routes.

The commercial traffic through the Panama Canal during the fiscal year ended June 30, 1930, classified according to principal trade routes, and nationality of vessels in each trade route, together with the corresponding totals for the fiscal years 1926 to 1930, inclusive, is summarized in tables presented at the end of this comment. Eight major routes of trade contributed to the majority of the traffic, representing 86 per cent of the total transits, 89.3 per cent of the Panama Canal net tonnage, 89.1 per cent of the total tolls collected, and 91.2 per cent of the total cargo in transit.

The United States intercoastal trade was, as in past years, the largest trade route serving the Canal. In 1930, it made up 32.9 per cent of the total number of transits, 35.9 per cent of the total Panama Canal net tonnage, 36 per cent of the total tolls collected, and 35 per cent of the cargo carried. This trade showed an increase over the previous year of 155 transits (8.2 per cent) and 387,109 tons of cargo (3.8 per cent). Traffic engaged in this trade has shown increases from year to year since 1926, with the exception of 1929, when, owing to a curtailment in mineral oil shipments from California, traffic showed a small decline.

The trade between Europe and North America (United States and Canada), which has ranked for several years as the second largest trade through the Canal, showed a decline of 173 transits (14.5 per cent) in comparison with the fiscal year 1929, while the cargo tonnage carried over this route decreased 337,492 tons (5.6 per cent). Vessels of British registry, with 436 transits, predominated in this trade in 1930, while those flying the Norwegian flag were second with 162. Transits of British vessels decreased 217 (33.2 per cent) in the number of transits in comparison with 1929, while cargo fell off 611,780 tons (20.5 per cent) on account of a marked absence of tramp shipping which was prominent in 1929 in the grain-carrying trade. As is noted, the decline in cargo was relatively smaller than the number of transits which was due to the fact that the above-mentioned grain fleet transited one way in ballast. Vessels of Norwegian registry increased 44 (37 per cent) and 229,690 (36.9 per cent) in cargo tonnage carried. The larger part of the increase in this traffic was in oil tankers.

The third trade of importance through the Canal was that between the east coast of the United States and South America. A very slight gain was made in point of transits—687 in 1930, against 682 in 1929, a gain of 5—while the cargo tonnage was relatively greater, showing an increase of 141,753 tons (4.1 per cent). Vessels of United States registry, with 356, contributed over one-half of the vessels in this trade during 1930, and showed an increase of 39 (12.3 per cent). United States vessels also carried 96,029 more tons of cargo in 1930 than in 1929, a gain of 5.5 per cent. Vessels of British registry ranked second in this trade, with 188 transits, an increase of 7 (3.8 per cent) over 1929. Cargo tonnage carried in British vessels increased 48,892 tons (6.2 per cent) over 1929. These two nationalities made up about 80 per cent of the transits and 75 per cent of the cargo carried over this trade in 1930.

In the trade between Europe and South America, which is the fourth ranking route of trade served by the Canal, a decrease was made in 1930 of 87 (13.8 per cent) in the number of transits and 429,556

(13 per cent) in cargo tons. The decrease was caused principally by the decline of nitrate shipments. Vessels of British registry contributed 162 transits and carried 880,619 tons of cargo over this route in 1930, which was an increase of 11 transits (7.3 per cent) and 88,537 tons of cargo (11.2 per cent) in comparison with the fiscal year 1929. Vessels of German registry were the second in importance in this trade in 1930, and contributed 115 transits of vessels carrying 665,927 tons of cargo. Although showing only a decrease of 2 transits as compared with 1929, a relatively greater decline was noted in the cargo tonnage which decreased 44,846 tons (6.3 per cent). In 1930, the combined vessels of British and German registry made up 51.1 per cent of the transits and carried 53.9 per cent of the cargo over the trade between Europe and South America.

In the trade route between the United States and the Far East (including the Philippine Islands), there was an increase of 55 transits (14.4 per cent) and 262,417 tons of cargo (10.2 per cent). This route showed the greatest relative gain of any, but less actual increase than the United States intercoastal trade. Japanese vessels led in the United States-Far East trade in numbers of ships, with 125 transits, carrying 830,961 tons of cargo. British vessels were next with 123 transits; they carried 737,272 tons. United States ships, making 117 transits, carried 857,026 tons of cargo. Ships of the 3 nations accounted for almost 83.5 per cent of the total transits in this trade in 1930, and carried 85.4 per cent of the total cargo over this trade. In comparison with 1929, transits of vessels of British registry increased 27 (28.1 per cent) in number of transits and 108,531 (17.3 per cent) in tons of cargo, while those of Japanese registry gained 18 (16.8 per cent) in number of transits and 142,313 (20.7 per cent) in cargo tonnage. Vessels of the United States registry, while showing a gain of 7 transits (6.4 per cent), registered a loss in cargo tonnage of 4,157 tons (0.48 per cent). There is a marked preponderance of traffic in one direction over this trade—outbound—many of the vessels which go to the Far East through the Panama Canal returning homeward via Suez.

The trade between Cristobal and the west coast of South America, contributing 239 transits to Canal traffic in 1930, represented a comparatively small proportion of the net tonnage, tolls, and cargo carried, owing to the small size of the vessels engaged in the trade. Traffic in this trade decreased 31 transits (11.5 per cent) and 44,178 (34 per cent) in tons of cargo carried. German vessels, with 119, made up 49.8 per cent of the transits and carried 70.8 per cent of the cargo over this trade in 1930, while those of Colombian registry, ranking second, made up 31 per cent of the transits and carried 14.6 per cent of the cargo. In comparison with 1929, German shipping over this trade made an increase of 10.2 per cent in transits and carried 15.6 per cent more cargo, while Colombian shipping decreased 12.9 per cent in transits and carried 53.8 per cent less cargo.

Shipping over the trade between Europe and Australasia increased 30 transits (14.8 per cent) and carried 15,499 tons (1.3 per cent) more cargo than in the previous year. Vessels of British registry predominated in this trade, as in previous years, representing 86.2 per cent of the transits and carrying 92.6 per cent of the cargo. Vessels of this nationality increased 18 transits (9.9 per cent) in comparison with 1929, while there was a slight decrease in cargo tonnage carried—19,454 tons (1.7 per cent).

The trade between the United States and Australasia contributed 131 transits of vessels in 1930, carrying 601,946 tons of cargo, a decrease of 3 transits (2.2 per cent) and 64,464 tons of cargo (9.7 per cent). Vessels of British registry with 78 transits and carrying 378,876 tons of cargo, dominated the shipping over this trade, while those of the United States with 38 transits, carrying 137,383 tons of cargo, were second. These two nationalities made up 88.5 per cent of the total transits over this trade in 1930 and carried 85.8 per cent of the cargo. In comparison with 1929, British shipping decreased 18 transits (18.7 per cent), while cargo carried by vessels of this nationality decreased 113,158 tons (23 per cent). United States shipping showed a gain of 9 transits (31 per cent) and 9,418 in cargo tons (7.4 per cent). As is true in the trade between the United States and the Far East, the larger part of the traffic in the trade between the United States and Australasia is outward, many of the vessels returning homeward via Suez or some other route.³

The amount of cargo shown in the tabulation below is the tonnage carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal:				
United States.....	2,035	10,767,190	\$9,752,310.03	10,506,137
Total, fiscal year, 1930.....	2,035	10,767,190	9,752,310.03	10,506,137
Total, fiscal year, 1929.....	1,880	9,826,329	8,998,920.79	10,119,028
Total, fiscal year, 1928.....	1,929	10,061,147	9,195,651.48	10,067,392
Total, fiscal year, 1927.....	1,875	10,400,896	9,113,767.29	10,560,505
Total, fiscal year, 1926.....	1,819	9,549,082	8,763,553.40	10,069,604
Between Europe and west coast of North America (United States and Canada):				
Belgian.....	14	71,200	76,971.95	99,248
British.....	436	2,252,460	1,983,443.38	2,366,611
Danish.....	39	203,654	199,236.59	272,094
Danzig.....	8	48,182	43,554.27	45,447
Dutch.....	47	316,088	302,133.15	277,342
French.....	69	374,425	329,082.00	334,329
German.....	97	601,688	493,576.06	579,398
Italian.....	31	182,735	185,243.90	168,935
Japanese.....	6	27,073	31,774.05	45,239
Norwegian.....	162	802,941	697,594.08	851,338
Swedish.....	54	260,025	211,283.57	275,227
United States.....	57	341,449	301,528.34	387,830
Total, fiscal year, 1930.....	1,020	5,481,920	4,855,421.34	5,703,338
Total, fiscal year, 1929.....	1,193	6,076,046	5,345,492.68	6,040,830
Total, fiscal year, 1928.....	1,238	6,060,178	5,381,870.44	6,012,992
Total, fiscal year, 1927.....	820	4,236,947	3,899,511.81	4,481,200
Total, fiscal year, 1926.....	712	3,652,508	3,328,232.84	3,715,311
Between east coast of United States and west coast of South America:				
Belgian.....	1	6,211	4,471.92	.....
British.....	188	795,700	755,616.18	842,057
Chilean.....	34	146,405	138,103.75	100,231
Danish.....	14	48,344	44,221.23	64,165
Danzig.....	1	6,063	4,365.36	.....
German.....	10	27,833	25,696.58	26,831
Greek.....	8	34,616	29,221.25	61,683
Italian.....	1	4,849	5,312.50	8,126
Japanese.....	4	18,311	17,617.00	24,024
Norwegian.....	22	85,536	87,895.20	123,122
Panamanian.....	4	19,588	18,578.34	26,652
Peruvian.....	1	5,415	5,422.50	7,577
Swedish.....	41	178,056	157,728.49	427,347

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Between east coast of United States and west coast of South America—Continued:				
United States.....	356	1,540,112	\$1,385,430.64	1,850,399
Yugoslav.....	2	9,271	8,721.25	17,950
Total, fiscal year, 1930.....	687	2,926,310	2,688,407.19	3,580,164
Total, fiscal year, 1929.....	682	2,777,737	2,562,035.13	3,438,411
Total, fiscal year, 1928.....	645	2,673,125	2,480,511.54	3,218,478
Total, fiscal year, 1927.....	557	2,339,303	2,159,256.25	2,931,446
Total, fiscal year, 1926.....	565	2,457,184	2,279,163.19	3,240,076
Between Europe and west coast of South America:				
Argentina.....	1	3,816	2,747.52	.....
Belgian.....	3	15,795	16,007.50	22,567
British.....	162	933,041	901,909.25	880,619
Chilean.....	12	17,747	15,890.11	5,280
Danish.....	1	5,263	4,210.00	9,878
Danzig.....	25	151,361	139,272.43	134,087
Dutch.....	55	305,742	234,562.52	311,768
Finnish.....	2	3,810	4,572.00	5,450
French.....	40	174,014	172,112.70	177,003
German.....	115	565,296	515,769.49	665,927
Greek.....	14	54,605	48,642.50	98,536
Italian.....	33	237,519	190,759.49	83,162
Japanese.....	1	4,449	4,472.50	7,100
Norwegian.....	45	164,458	139,241.32	238,454
Spanish.....	1	4,209	4,572.50	8,250
Swedish.....	7	31,711	28,410.27	42,976
United States.....	1	5,667	5,490.00	10,072
Yugoslav.....	24	102,387	960,077.49	166,412
Total, fiscal year, 1930.....	542	2,780,890	2,524,719.59	2,867,541
Total, fiscal year, 1929.....	629	3,112,089	2,852,857.29	3,297,097
Total, fiscal year, 1928.....	573	2,713,299	2,575,672.66	2,905,465
Total, fiscal year, 1927.....	452	2,084,989	2,008,781.00	1,949,603
Total, fiscal year, 1926.....	485	2,199,857	2,145,543.51	2,395,740
Between east coast of the United States and Far East (including Philippine Islands):				
British.....	123	679,158	542,830.00	737,272
Danish.....	21	69,182	58,342.50	104,676
Japanese.....	125	624,174	650,267.80	830,961
Norwegian.....	44	231,619	170,988.75	274,586
Panamanian.....	6	41,862	29,921.25	25,339
Swedish.....	1	5,213	5,212.50	8,875
United States.....	117	629,457	601,668.00	857,026
Total, fiscal year, 1930.....	437	2,280,665	2,059,230.80	2,838,735
Total, fiscal year, 1929.....	382	1,940,066	1,788,620.99	2,576,318
Total, fiscal year, 1928.....	311	1,638,006	1,528,681.70	2,066,275
Total, fiscal year, 1927.....	311	1,628,894	1,528,867.06	1,983,464
Total, fiscal year, 1926.....	279	1,486,270	1,418,938.55	1,755,048
Between Cristobal and west coast of South America:				
British.....	1	622	460.50	.....
Colombian.....	74	13,026	15,371.33	12,543
Dutch.....	34	25,210	12,495.00	9,649
German.....	119	101,931	84,921.25	60,570
Norwegian.....	1	504	362.88	.....
Panamanian.....	1	124	141.25	75
Swedish.....	3	2,238	1,824.24	639
United States.....	6	7,593	5,760.25	2,142
Total, fiscal year, 1930.....	239	151,248	121,336.70	85,618
Total, fiscal year, 1929.....	270	224,611	173,312.84	129,796
Total, fiscal year, 1928.....	316	265,074	222,054.47	218,159
Total, fiscal year, 1927.....	169	140,957	112,130.60	92,937
Total, fiscal year, 1926.....	140	178,543	138,838.13	116,258

Trade routes and nationality of vessels.	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Between Europe and Australasia:				
British.....	200	1,521,061	\$1,364,301.60	1,119,085
French.....	12	64,446	65,700.00	40,379
Norwegian.....	12	41,268	38,514.10	22,900
Swedish.....	8	41,487	31,516.10	26,063
Total, fiscal year, 1930.....	232	1,668,262	1,500,031.80	1,208,427
Total, fiscal year, 1929.....	202	1,510,340	1,389,756.04	1,192,928
Total, fiscal year, 1928.....	208	1,483,205	1,391,250.44	1,150,663
Total, fiscal year, 1927.....	183	1,296,957	1,242,577.14	1,033,217
Total, fiscal year, 1926.....	184	1,302,913	1,231,493.14	1,100,696
Between east coast of the United States and Australasia:				
British.....	78	450,822	393,425.15	378,876
Danzig.....	1	4,691	3,381.25	6,532
French.....	1	4,724	4,578.75	7,800
Norwegian.....	10	57,737	52,876.25	60,274
Swedish.....	3	11,203	10,112.66	11,081
United States.....	38	183,942	169,750.54	137,383
Total, fiscal year, 1930.....	131	713,119	634,124.60	601,946
Total, fiscal year, 1929.....	134	711,326	639,913.71	666,410
Total, fiscal year, 1928.....	131	686,707	629,793.65	638,810
Total, fiscal year, 1927.....	172	882,264	824,654.00	828,919
Total, fiscal year, 1926.....	167	822,625	777,503.64	760,493
Miscellaneous:				
British.....	348	1,374,098	1,255,993.27	1,248,149
German.....	36	136,326	116,249.78	55,296
Norwegian.....	75	276,038	222,658.23	237,604
United States.....	275	1,059,085	998,724.90	748,244
All other.....	128	365,463	347,681.78	349,033
Total, fiscal year, 1930.....	862	3,211,010	2,941,307.96	2,638,326
Total, fiscal year, 1929.....	1,041	3,659,250	3,376,467.44	3,202,188
Total, fiscal year, 1928.....	1,105	3,877,893	3,639,013.39	3,352,475
Total, fiscal year, 1927.....	936	3,216,608	3,339,284.96	3,886,924
Total, fiscal year, 1926.....	846	3,130,699	2,847,789.58	2,884,222
Grand total, fiscal year, 1930.....	6,185	29,980,614	27,076,890.01	30,030,232
Grand total, fiscal year, 1929.....	6,413	29,837,794	27,127,376.91	30,663,006
Grand total, fiscal year, 1928.....	6,456	29,458,634	26,944,499.77	29,630,709
Grand total, fiscal year, 1927.....	5,475	26,227,815	24,228,830.11	27,748,215
Grand total, fiscal year, 1926.....	5,197	24,774,591	22,931,055.98	26,037,448

Fruit Shipments from Pacific Northwest.

A heavy movement through the Panama Canal of fresh fruit from the Pacific Northwest is anticipated in the next two months. The Blue Star Line is reported to have added its fourth extra ship for a mid-December position; the three other additional vessels, the *Gothicstar*, *Napierstar*, and *Normanstar*, transited the Canal last month en route to the Pacific Northwest. The four extra vessels are expected to lift about 600,000 boxes of apples for European ports.

The North Pacific Coast Line (joint service of Holland-America Line and Royal Mail Steam Packet Company) is reported also to have added two extra fresh fruit carriers, which will lift apples for European ports, sailing from the west coast in December. This brings the total number of sailings of refrigerator ships offered by the latter line for the season from September to March up to 28.

Silk via the Panama Canal.

Bradstreet's of November 1, 1930, states that the traffic bureau of the Silk Association of America reports that the Panama Canal is becoming a more and more popular route for shipping silk cargoes from the Orient to the New York market. The report further states that in the first 9 months of the year a total of 106,556 bales of raw silk were routed via the Panama Canal as compared with 81,549 bales during the same period in the previous year. The article also states that raw silk shipments in 1929 via the Panama Canal were 116,496 bales as compared with 31,319 bales in 1928.

Statistics compiled by The Panama Canal indicate that in 1928 silk amounting to 3,319 tons was routed through the waterway; in 1929, 14,304 tons; and in the first 9 months of the current calendar year, 13,288 tons, which figures are in general agreement with those of the Silk Association. The Canal figures are for shipments to all ports on the Atlantic coast of the United States, but New York receives by far the greater part of this silk.

From the Panama Canal statistics it is indicated that the larger portion of the silk routed via the Canal has been transhipped at Pacific coast ports of the United States to fast intercoastal carriers. With the current development, however, of the Oaska Shosen Kaisha's new express service (an item concerning which appeared in *THE PANAMA CANAL RECORD* of August 13, 1930), indications point possibly to greater shipments direct from the Orient, especially in view of the fact that the new ships are equipped with specially constructed silk rooms.

New Mooring Basin in Balboa Harbor.

The Dredging Division recently started dredging on a new mooring basin in Balboa inner harbor. The new mooring area was deemed necessary in order to eliminate the anchoring of vessels in the channel opposite Balboa inner harbor, thus removing a dangerous condition to shipping; to eliminate expensive costs of maintenance dredging in the areas previously in use for mooring vessels in the channel; and to facilitate the maneuvering of vessels in and out of the harbor.

The new mooring basin is to be located to the north of the harbor, between the east prism line and the north harbor limit, in the area partly dredged last year for the Albbrook Field fill. It is to be 800 feet long, 700 feet wide, and of a depth of 41.7 feet, mean low tide. The work is being carried on as a part of Project No. 1, which takes in the deepening of the Pacific entrance channel from Miraflores Locks to the sea buoys, and Balboa inner harbor, from 45 feet to a ruling depth of 50 feet, mean sea level.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 26, 1930.

No. 810.

Panama Bay, Perlas Islands, measured mile discontinued. The measured mile beacons on Pedro Gonzales Island as announced in Notice to Mariners, No. 773, Balboa Heights, October 6, 1930, have been found to be in error and should not be used. Notice No. 773 is accordingly canceled.

J. L. SCHLEY,
Acting Governor.

Revised Express Air Mail Schedule.

The express air mail schedule between the Canal Zone and Miami, which was printed in THE PANAMA CANAL RECORD for July 16, 1930, has been changed, effective with the departure from Cristobal on December 3d, to afford service between the Canal Zone and Jamaica, and faster service to Cuba and Miami. The flying time to Miami has been reduced by about four and one-half hours and the flying distance by about 100 miles. Heretofore the planes in this express service have flown from Cristobal to Puerto Cabezas, Nicaragua, where they remained over night. In the second day they flew direct to Habana and thence to Miami, arriving at Miami about 5 p. m. Under the new schedule they will leave Cristobal about three hours earlier and reach Miami about 10.45 a. m. the following day. The following schedule will be observed:

NORTHBOUND.

Sundays and Wednesdays.

Lv. Cristobal 6 a. m.
Ar. Kingston, Jamaica, 1.45 p. m.
Ar. Cienfuegos, Cuba, 5.15 p. m.

Mondays and Thursdays.

Lv. Cienfuegos, Cuba, 8.15 a. m.
Ar. Miami, Fla., 10.45 a. m.

SOUTHBOUND.

Tuesdays and Fridays.

Lv. Miami, Fla., 3 p. m.
Ar. Cienfuegos, Cuba, 5.15 p. m.

Wednesdays and Saturdays.

Lv. Cienfuegos, Cuba, 6 a. m.
Ar. Kingston, Jamaica, 10 a. m.
Ar. Cristobal, C. Z., 5.30 p. m.

On account of the early departure on Sundays and Wednesdays of the express planes leaving Cristobal, mail intended for dispatch by them will have to be deposited in Canal Zone post offices, except Cristobal, not later than one-half hour before the departure of the late afternoon train for Colon on the day preceding, that is, on Saturday or Tuesday. At the Cristobal post office dispatches close at 1 a. m., Sundays and Wednesdays.

There is no change in other services, including those to and from South America, except that Pan American Airways planes are making La Guaira, Venezuela, their terminal instead of Puerto Cabello.

The following is a summary of air mail schedules to and from Cristobal:

DISPATCHES.

- (a) *Express service to Miami*: Semiweekly, on Sundays and Wednesdays.
- (b) *Regular service to Miami*: Weekly, on Fridays.
- (c) *Regular service to Brownsville, via Central America*: Triweekly, on Sundays, Wednesdays, and Fridays.
- (d) *Regular service to Colombia (west coast), Ecuador, Peru, Chile, Argentine, and Uruguay*: Semiweekly, on Sundays and Thursdays.
- (e) *Regular service to Colombia (east coast), Curacao, and Venezuela*: Weekly on Thursdays.

ARRIVALS.

- (a) *Express service from Miami*: On Wednesdays and Saturdays.
- (b) *Regular service from Miami*: On Mondays and Saturdays.
- (c) *Regular service from Brownsville*: On Mondays, Wednesdays, and Saturdays.
- (d) *Regular service from South America (west coast)*: On Tuesdays and Saturdays.
- (e) *Regular service from South America (east coast)*: On Saturdays.

New Boundary Lines for Fare Zones in Panama City, Ancon, and Balboa.

New boundary lines for the fare zones in the Southern District, which includes Panama City, Balboa, and Ancon, have been outlined in an Executive Order approved by the Secretary of War on October 10, 1930, with the agreement of the authorities of Panama, and will go into effect January 1, 1931.

These zones are used as the base on which fares are charged for the transportation of passengers in public vehicles. The changes made do not greatly affect the former boundaries, the intention being to clarify the status of recent building developments.

The new order is a revision of Section 6, Schedule A, of the Executive Order of February 26, 1921, entitled "Regulations establishing maximum rates of fare and governing transportation of passengers for hire in the Canal Zone." The changes are as follows:

1st Panama City Fare Zone.—Does not include Gorgas Hospital Admitting Office which is within Ancon and Heights fare zones only.

Ancon Fare Zone.—Includes Admitting Office in Gorgas Hospital Administration Building.

Balboa Fare Zone.—Isthmian Airways hangar included in this zone; boundary line changed to include junction of Amador Road and Banyan Street.

La Boca Fare Zone.—Fortified Islands and causeway are specifically excluded from this zone.

2d Panama City Fare Zone.—New boundary outlined as follows: "The part of Caledonia District extending from the east of the Panama Railroad line as far as the Quinta Santa Isabel, the old Polvorin, the Sabanas Road as far as Bella Vista tramway station, and the suburbs of Vista del Mar and Peña Prieta, including the Exposition Grounds."

3d Panama City Fare Zone.—New boundary outlined as follows: "Bella Vista (old and new) as far as the Club Miramar on one side of the Sabanas Road and La Cresta as far as Tumbamuertos on the other side."

Following are the specified locations and fare zones:

Locations and fare zones.	Diablo.	Corozal.	Fort Clayton.	Filtration Plant and Locks, Miraflores.	Pedro Miguel.	Paraiso.	Kennelworth and Hippodrome.	Las Sabanas Police Station.	Golf Club.	Aviation Field, P. A. A. Airport.
1st Panama City							\$0.60	\$0.85	\$1.00	\$1.50
2d Panama City							0.30	0.60	0.85	1.35
3d Panama City							0.25	0.45	0.60	1.25
Ancon	\$0.40	\$0.75	\$1.00	\$1.50	\$2.00	\$2.25	0.60	0.85	1.00	1.50
Balboa										
Heights										
La Boca										
Kennelworth and Hippodrome	0.50	0.60	1.00	1.50	2.00	2.25	0.25	0.25	0.50	1.00
Las Sabanas Police Station	0.75	0.75	1.25	1.75	2.25	2.50	0.25	.....	0.25	1.00
Golf Club	1.00	1.00	1.50	2.50	2.50	2.75	0.50	0.25	.....	0.50
Aviation field, P. A. A. Airport	1.75	2.00	2.50	2.50	2.75	2.75	1.00	1.00	0.50	.....
Shriner's Mosque, Ancon	Add 10 cents, U. S. currency, to zone and location fares for each adult person carried to door of mosque on upper level.									

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division

Fire Aboard Freighter "Ludwigshafen."

The German freighter *Ludwigshafen* of the North German Lloyd, en route from Talcahuano, Chile, via wayports, to Hamburg, Germany, laden with nitrate and general cargo, arrived at Balboa on the morning of December 1, 1930, with fire in No. 5 hold. The fire was discovered in No. 5 hold at about 1.45 a. m. on November 30, when the ship was about 30 miles south of Punta Mala, Panama. Shortly afterward the hatch covers were blown off of holds 4 and 5 and the fire extended to the provisions storerooms in the after peak. The intense heat and poisonous fumes from the nitrate cargo made it impossible to combat the fire, and the master, fearing an explosion, sent out an S. O. S. call and ordered the crew from the ship. After standing by in small boats for several hours, during which time the fire had subsided somewhat, the crew returned to the vessel and succeeded in extinguishing the fire in No. 4 hold, and holding it in check in No. 5 hold. The ship proceeded slowly toward Balboa.

Ships approaching the area were requested to be ready to render assistance, and the Navy tug *Sciota* put out from Balboa. Early in the afternoon the North German Lloyd agency requested The Panama Canal to send a tug with large pumps, and the *Gorgona* was dispatched at 4 p. m., with firemen, whereupon the *Sciota* returned to Balboa. The *Gorgona* met the *Ludwigshafen* at a point about 70 miles from Balboa, at approximately 10 p. m.; two fire lines were carried aboard and in a short time the fire in lower No. 5 hold was extinguished and between decks cooled down. The fire in the after peak and between decks of No. 5 hold was not extinguished at the time as the master requested that no more water be put on the ship. The vessel then proceeded to port where, after about two hours work by local firemen, the fire was extinguished.

The cargo in Nos. 4 and 5 holds, and the ship's provisions stored in the after peak, are a total loss, while the vessel herself is badly damaged. Temporary repairs are being made at Balboa.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., November 21, 1930.

No. 805

Pacific Ocean, off west coast of Panama, Jicarita Island, light established. A new light was established to-day on the southerly portion of Jicarita Island:

Description: Pyramidical steel skeleton tower 50 feet high; painted white with day marks on two sides; focal plane 325 feet above mean high water. *Position:* Latitude 7° 11' 45" N., longitude 81° 47' 31" W.

Projection of location on chart of Jicarita Island is slightly in error but it will be corrected when the new Navy survey is completed.

Characteristics: Two separate apparatuses, flashing white, one and one-half seconds each in fifteen seconds. These flashes may occur simultaneously or successively, hence the interval between flashes may be irregular. *Visibility:* 18 miles through an open angle of 208° from 90° to 298° (from North). Contour of island obscures remainder of circle through North.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending November 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Caldas.	National Navigation Co.	November 14.	November 15.	45	39
San Jose.	United Fruit Co.	November 14.	November 15.	480	127
Kinai Maru.	Osaka Shosen Kaisha	November 15.	November 16.	107	
Cuyama.	U. S. Government.	November 16.	November 17.	3,571	
Adalia.	Hamburg-American Line.	November 16.	November 16.	183	
Lobos.	Pacific Steam Navigation Co.	November 17.	November 17.		50
Cambari.	U. S. Government.	November 18.	November 18.	167	17
Santa Elisa.	Grace Line.	November 18.	November 18.	38	130
Venezuela.	Panama Mail S. S. Co.	November 18.	November 19.	137	7
Colombia.	Panama Mail S. S. Co.	November 19.	November 19.	33	8
Abraham Lincoln.	Fred Olsen & Co.	November 19.	November 20.	1,151	
Nosa King.	N. O. & S. A. S. S. Co.	November 20.	November 23.		293
Saramacca.	United Fruit Co.	November 20.	November 21.	87	9
Toba Maru.	Nippon Yusen Kaisha	November 21.	November 22.	119	
City of San Francisco.	Panama Mail S. S. Co.	November 22.	November 22.		3
Santa Maria.	Grace Line.	November 22.	November 22.	3	1
Spreewald.	Hamburg-American Line.	November 25.	November 26.	163	44
Santa Clara.	Grace Line.	November 26.	November 26.	30	
Amsterdam.	Royal Netherlands S. S. Co.	November 26.	November 26.	113	
Tai Yang.	Barber-Williamson Line.	November 26.	November 26.	214	
Rangitata.	New Zealand Shipping Co.	November 26.	November 27.	31	
Frost.	West India Oil Co.	November 27.	November 29.	325	15
California.	Panama-Pacific Line.	November 28.	November 28.		168
San Mateo.	United Fruit Co.	November 29.	November 30.	654	49
Mitra.	Anglo-Saxon Petroleum Co.	November 30.		7,329	

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.	January 6.	January 11.	January 14.	January 18.	January 21.	January 26.
Ancon.	January 20.	January 25.	January 28.	February 1.	February 4.	February 9.
Cristobal.	February 3.	February 8.	February 11.	February 16.	February 19.	February 24.
Ancon.	February 17.	February 22.	February 25.	March 1.	March 4.	March 9.
Cristobal.	March 3.	March 8.	March 11.	March 15.	March 18.	March 23.
Ancon.	March 17.	March 22.	March 25.	March 29.	April 1.	April 6.
Cristobal.	March 31.	April 5.	April 8.	April 12.	April 15.	April 20.
Ancon.	April 14.	April 19.	April 22.	April 26.	April 29.	May 4.
Cristobal.	April 28.	May 3.	May 6.	May 10.	May 13.	May 18.
Ancon.	May 12.	May 17.	May 20.	May 24.	May 27.	June 1.
Cristobal.	May 26.	May 31.	June 3.	June 7.	June 10.	June 15.
Ancon.	June 9.	June 14.	June 17.	June 21.	June 24.	June 29.
Cristobal.	June 23.	June 28.	July 1.	July 5.	July 8.	July 13.
Ancon.	July 8.	July 13.	July 16.	July 19.	July 22.	July 27.
Cristobal.	July 21.	July 26.	July 29.	August 2.	August 5.	August 10.
Ancon.	August 4.	August 9.	August 12.	August 16.	August 19.	August 24.
Cristobal.	August 18.	August 23.	August 26.	August 31.	September 3.	September 8.
Ancon.	September 1.	September 6.	September 9.	September 13.	September 16.	September 21.
Cristobal.	September 15.	September 20.	September 23.	September 27.	September 30.	October 5.
Ancon.	September 29.	October 4.	October 7.	October 11.	October 14.	October 19.
Cristobal.	October 14.	October 19.	October 22.	October 25.	October 28.	November 2.
Ancon.	October 27.	November 1.	November 4.	November 8.	November 11.	November 16.
Cristobal.	November 10.	November 15.	November 18.	November 22.	November 25.	November 30.
Ancon.	November 24.	November 29.	December 2.	December 6.	December 9.	December 14.
Cristobal.	December 8.	December 13.	December 16.	December 20.	December 23.	December 28.
Ancon.	December 22.	December 27.	December 30.	January 3.	January 6.	January 11.

* Effective April 28th, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 10, 1930. No. 19.

Overhaul of Gatun Locks.

Work on the quadrennial overhaul of the locks at Gatun is to be commenced on January 7, 1931, and will take about 90 to 100 days to complete. In addition to the routine overhaul, the program includes the removal, inspection, and repair of 4 pairs of miter gates, and the installation of 19 new cylindrical valves, which will complete the installation of the improved type valve began during the last overhaul of these locks in 1927. The feature of the new valves, which were manufactured by the Mechanical Division, is that the wearing surface can be removed when worn, thus avoiding the necessity of replacing the entire valves as in the old design.

As in the past, one side of the locks will be overhauled at a time, leaving the other side to take care of Canal traffic. A double operating shift for 16 hours and a single operating shift the remaining 8 hours will put vessels through Gatun Locks, while double chamber operation will be carried on at the Pacific Locks for 16 hours.

Supplement No. 1.—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
EXECUTIVE OFFICE, BALBOA HEIGHTS, C. Z., December 2, 1930.

Item 22.—COAL.

(Effective December 2, 1930.)

	Cristobal-Colon.	Balboa.
4. For steamships, including warships of all nations, delivered from coaling plants, per ton of 2,240 pounds, except as provided in paragraph 5.	\$7.25	\$10.25
5. For vessels transiting the Canal that are directed by The Panama Canal to take coal at Balboa on account of the condition of the plants, the quantity available, or for the purpose of expediting traffic.		7.25
6. For steamships, including warships of all nations, when delivered from lighters in quantities of 50 tons or more, per ton of 2,240 pounds.	8.25	11.25
7. For steamships, including warships of all nations, when delivered from lighters in quantities of less than 50 tons, with minimum charge for 20 tons and with maximum charge not to exceed that for 50 tons at prices specified in paragraph 6, per ton of 2,240 pounds.	10.25	13.25

J. L. SCHLEY,
*Acting Governor, The Panama Canal,
2d Vice President, Panama Railroad Company.*

	3	16.45	3	17.10	4	12.30	4	13.50	American	Lukenbach Line	436.6	57.2	23.0	Houston, Tex.	Seattle, Wash.	General	3,800	8,543	6,402
Julia																			
Cirietto	3	16.45	3	17.10	4	12.30	4	13.50	American	Stand Fruit & S. S. Co.	436.6	57.2	23.0	Cristobal, C. Z.	Gatun, C. Z.	General	3,800	8,543	6,402
Colorado	3	10.40	4	5.45	4	15.30	6	8.45	American	U. S. Navy	600.0	97.3		Hampton Rds., Va.	Los Angeles, Calif.	Ballast		8	8
Rangitiki	3	20.10	4	6.10	4	14.33	4	21.00	British	N. Z. Shipping Co.	531.0	70.0	28.0	London, England	Wellington, N. Z.	General	4,570	18,197	13,526
Tidewater	3	17.50	4	7.15	4	15.49	4	16.50	American	Tidewater Oil Co.	486.6	66.0	26.0	New York, N. Y.	Los Angeles, Calif.	Ballast		9,734	6,349
C. O.																			
Stillman	4	4.45	4	8.40	4	16.50	4	23.02	British	International Pet. Co.	565.7	75.6	24.0	New York, N. Y.	Talara, Peru.	Ballast		16,780	9,885
Alda	3	23.40	4	13.10	4	20.18	4	22.00	German	North German Lloyd	359.4	51.0	16.3	Hamburg, Germany	Valparaiso, Chile.	General	1,296	4,791	3,392
Cape Horn	4	20.00	4	20.30	5	10.36	5	11.42	British	Lytle Shipping Co.	425.0	56.0	16.0	Liverpool, England	Vancouver, B. C.	Ballast		6,813	4,538
Robin																			
Goodfellow	4	18.55	5	6.00	5	13.47	5	15.10	American	Isthmian S. S. Lines	424.0	55.2	28.10	Baltimore, Md.	Vancouver, B. C.	Steel, general	8,600	7,470	5,536
Pacific																			
Redwood	4	21.20	5	6.15	5	14.33	5	15.45	American	Dixon S. S. Corp.	499.6	54.2	17.0	Philadelphia, Pa.	Tacoma, Wash.	General	3,604	6,537	4,845
Sun	4	23.00	5	7.15	5	15.50	5	16.45	American	Sun Oil Co.	480.6	60.0	21.0	Chester, Pa.	Los Angeles, Calif.	Ballast		9,620	6,476
Silvervev	5	2.40	5	7.30	5	14.57	6	16.00	British	Kerr Line	451.0	61.4	19.10	New York, N. Y.	Colombo, Ceylon	General	2,099	9,309	6,222
Cyprus	5	3.25	5	9.05	5	16.05	6	6.20	American	Col. D. C. Jackling	227.0	34.1	13.0	Vera Cruz, Mexico	Guayaquil, Ecuador	Ballast		1,101	558
Romanus	5	2.30	5	9.05	5	16.05	6	6.20	British	Blue Star Line	420.0	34.0	18.0	N. Shields, Eng.	Los Angeles, Calif.	Ballast		7,439	5,848
Jefferson Myers	5	2.10	5	11.10	5	17.48	5	19.00	American	Intercean S. S. Co.	440.0	56.0	16.6	London, England	Vancouver, B. C.	General	2,429	8,300	6,020
Oroya	4	22.45	5	12.10	5	20.05	5	21.35	British	Pacific Steam Nav. Co.	525.3	63.0	23.6	Liverpool, England	Tacabuan, Chile	General	2,934	13,137	9,067
El Aleto	4	12.35	5	13.00	5	20.35	6	3.02	British	Imperial Oil Co.	438.0	57.6	22.0	New York, N. Y.	Talara, Peru.	Ballast		7,555	5,049
Relay	5	18.40	5	14.00	5	23.00	6	19.30	American	All America Cables	240.0	32.2	19.0	New York, N. Y.	Balboa, C. Z.	Ballast		1,291	675
Sutherland	3	14.05	5	14.20	5	21.20	5	22.50	American	Nelson Line	380.0	53.2	18.8	Philadelphia, Pa.	Seattle, Wash.	Iron, steel, gen.	2,955	5,654	4,123
Capra	4	10.20	6	6.08	6	13.28	6	14.30	Italian	Nav. Generale Italiana	410.0	56.0	21.6	Genoa, Italy	Valparaiso, Chile.	General	1,356	8,444	6,608
Queen Maud	6	6.50	6	7.10	6	15.13	6	16.15	British	DuPont de Nemours	400.2	52.3	18.0	Baltimore, Md.	Tacabuan, Chile.	General	1,902	5,748	3,955
Cities Service																			
Oklahoma	6	8.55	6	9.10	6	15.45	6	17.00	American	Richfield Oil Co.	430.0	59.2	18.0	Baltimore, Md.	Los Angeles, Calif.	Ballast		8,083	5,347
Acajula	2	16.00	6	9.10	6	16.41	6	17.30	British	Pacific Steam Nav. Co.	215.7	34.0	15.6	Cristobal, C. Z.	Champerico, Guat.	General	588	1,273	706
Suriname	5	14.00	6	9.20	6	16.31	6	17.30	American	United Fruit Co.	337.0	41.9	17.0	Cristobal, C. Z.	San Francisco, Cal.	Ballast		3,607	2,329
Santa Inez	5	18.50	6	10.05	6	17.10	6	21.15	American	Grace Line	370.0	53.2	21.6	New York, N. Y.	Valparaiso, Chile.	General	2,184	6,255	4,016
San Zeferino	6	9.45	6	10.25	6	19.45	6	21.15	British	Anglo-Mexican Pet. Co.	420.0	54.6	26.0	Pto. Mexico, Mex.	Valparaiso, Chile.	Fuel oil, grease	8,349	6,636	4,016
Point Montara	6	12.10	6	12.25	6	19.50	6	21.15	American	Gulf-Pacific Line	324.0	46.2	23.0	Tampa, Fla.	Seattle, Wash.	General	3,200	3,984	2,612
Arana	6	00.10	6	14.10	6	21.35	6	22.59	British	Pacific Steam Nav. Co.	303.0	43.0	16.2	New York, N. Y.	Tocopilla, Chile.	General	675	2,851	1,776
La Plata																			
Maru	6	16.50	6	18.25	7	9.40	7	10.38	Japanese	Osaka Shosen Kaisha	430.0	56.0	23.0	Buenos Aires, Arg.	Kobe, Japan.	General	3,212	7,875	5,821
Canadian																			
Importer	6	18.45	6	20.10	7	11.44	7	13.05	British	Can. Nat. Steamships	400.0	52.0	18.6	Montreal, Canada	Vancouver, B. C.	General	3,600	5,891	4,186

Towing barge from Gatun.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	3	16.45	3	17.10	4	12.30	4	13.50	American	Lukenbach Line	436.6	57.2	23.0	Houston, Tex.	Seattle, Wash.	General	3,800	8,543	6,402
San Bernardino	29	19.45	30	6.35	30	15.30	30	17.35	American	Quaker Line	401.5	54.2	24.0	Portland, Oreg.	Philadelphia, Pa.	General	6,100	6,755	4,873
Colombo	30	3.10	30	7.29	30	14.30	1	14.05	Italian	Italian Line	518.0	64.0	24.0	Valparaiso, Chile	Genoa, Italy	General	3,287	12,553	7,516
Canadian																			
Highlander	29	20.55	30	8.25	30	16.50	30	19.45	British	Can. Nat. Steamships	400.0	52.4	12.0	Ankland, N. Z.	Halifax, N. S.	General	970	6,192	4,402
Harpden	30	10.00	30	10.45	30	18.30	21	21.55	British	J. & C. Harrison	400.9	54.5	24.0	Salaverry, Peru	Marselles, France	Sugar	7,537	5,885	4,179
Hanley	1	3.00	1	7.11	1	16.00	1	16.00	American	Hanley S. S. Co.	440.0	56.0	29.0	Longview, Wash.	Newark, N. J.	Lumber	9,300	8,310	6,005
Rajahm	1	7.55	1	8.47	1	16.25	1	16.35	British	Dale & Co.	425.9	57.0	27.0	Vancouver, B. C.	Rotterdam, Holland	Wheat	9,230	6,888	4,961
Pacific Cedar	1	8.10	1	9.13	1	17.20	1	21.34	American	Dimon S. S. Corp.	399.4	54.7	26.0	Seattle, Wash.	New York, N. Y.	Lumber, general	7,600	6,138	4,353
Drigo	1	9.00	1	9.48	1	17.35	1	17.35	American	The Texas Co.	416.8	56.1	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	8,471	6,931	5,009

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Tremadoc.	1	8.40	1	10.08	1	18.85	British.	Hain S. S. Co.	400.1	52.2	24.3	Atitlagasta, Chile.	Azores ¹¹ .	Nitrates.	7,500	5,797	4,090
Bravo	1	8.25	1	10.42	1	10.10	American.	Charles Nelson & Co.	324.0	46.2	24.3	Bellingham, Wash.	Philadelphia, Pa.	Lumber, general.	4,117	3,985	2,680
Prince Albert.	28	6.00	1	11.37	1	10.00	British.	Atlantic Pacific Nav. Co.	332.0	30.0	15.0	Vancouver, B. C.	St. Pierre, France.	Spirits.	525	1,076	567
Monmouth.	9	9.45	1	12.11	1	20.05	American.	Munson, McCork & Line.	400.7	54.2	27.0	Pt. Townsend	Philadelphia, Pa.	Lumber, general.	7,066	6,623	4,668
Coushnet.	1	10.05	1	12.45	2	9.10	British.	T. & J. Harrison.	395.5	52.5	24.0	Vancouver, B. C.	Liverpool, England.	General.	6,391	5,753	3,857
Bretwalda.	1	10.05	1	14.05	2	9.10	British.	Grace & Co.	400.0	52.5	24.0	Chimbote, Peru.	Marseilles, France.	Brown sugar.	7,219	5,758	4,067
Carlton.	1	13.00	1	18.38	2	12.50	British.	R. Chapman & Son.	390.0	53.5	25.0	Vancouver, B. C.	London, England.	General.	8,041	5,612	4,119
Penelope ¹¹ .	1	17.00	2	6.15	2	14.00	Danish.	W. Tinkesell Riedel.	470.1	63.2	27.2	Talara, Peru.	Rotterdam, Holland.	Gasoline.	11,236	9,802	6,127
Sutaria.	1	20.30	2	6.35	2	15.10	British.	Donaldson Line.	425.0	56.0	27.1	Vancouver, B. C.	Glasgow, Scotland.	General.	7,827	7,429	5,429
Guayaquil.	1	21.32	2	7.09	2	16.00	American.	Panama R. R. S. S. Line.	251.0	43.6	19.2	Guayaquil, Ecuador.	New York, N. Y.	General.	1,789	2,874	1,944
Acapulco.	2	6.10	2	7.20	2	16.00	British.	Pacific Steam Nav. Co.	215.7	33.6	12.4	Champertio, Guat.	Cristobal, C. Z.	General.	210	1,273	706
Austin City.	1	21.45	2	7.51	2	16.25	American.	Isthmian S. S. Lines.	424.2	56.2	27.0	Vancouver, B. C.	Dublin, Ireland.	Lumber, general.	7,846	7,611	5,450
Kanger ¹¹ .	2	2.45	2	8.30	2	17.20	British.	Furness, Withy & Co.	436.4	60.3	27.0	Vancouver, B. C.	London, England.	General.	8,275	9,725	6,942
Montanan.	2	9.00	2	10.09	2	17.35	American.	Amer.-Hawaiian Line.	404.6	53.9	26.3	Portland, Ore.	Boston, Mass.	General.	6,330	6,756	4,775
Herman F.	2	9.30	2	10.31	2	18.10	American.	A. C. Dutton Co.	409.8	54.2	24.3	Everett, Wash.	New York, N. Y.	Lumber.	7,000	6,581	4,784
Whiton.	2	10.00	2	10.54	2	19.40	British.	Blue Star Line.	450.0	58.5	25.0	Vancouver, B. C.	Newcastle, Eng.	Apples, general.	4,234	8,240	5,395
Tacoma Star.	2	10.30	2	11.56	2	20.40	British.	Empire Shipping Co.	421.2	54.2	25.0	Vancouver, B. C.	Hampton Rds.	Wheat.	8,200	6,265	4,570
Hasty.	2	13.30	2	13.36	2	21.30	American.	U. S. Navy.	461.6	60.0	30.0	Los Angeles, Calif.	Hampton Rds.	Fuel oil, gen.	10,610		
Sapelo ¹¹ .	1	9.40	2	13.36	2	21.30	American.	U. S. Navy.	461.6	60.0	30.0	Los Angeles, Calif.	Hampton Rds.	Fuel oil, gen.	10,610		
Lewis.	2	12.20	2	14.47	2	22.55	American.	Luckenbach Line.	496.0	68.2	27.0	Portland, Ore.	Boston, Mass.	Lumber, general.	9,398	7,382	5,663
Chile ¹¹ .	2	17.35	2	13.55	3	14.30	Danish.	East Asiatic Co.	425.3	55.2	25.2	Vancouver, B. C.	Copenhagen, Den.	General.	9,482	11,487	8,762
Guatemala.	2	10.25	3	6.32	3	13.15	American.	Panama Mail S. S. Co.	360.2	51.6	24.3	San Francisco, Cal.	New York, N. Y.	General.	2,627	5,776	4,051
Sanjo Maru ¹¹ .	14	40.5	3	6.41	3	14.20	Japanese.	Osaka Shosen Kaisha.	446.0	60.5	22.3	Kongkong, China.	New York, N. Y.	General.	2,844		
San Pedro.	19	40.5	3	7.14	3	15.05	American.	States S. S. Co.	395.0	55.0	27.0	N. Westm. ter, B. C.	London, England.	Lumber, general.	6,971	7,330	5,253
Nevada.	23	40.5	3	7.14	3	15.05	American.	French S. S. Co.	419.0	54.0	26.0	Portland, Ore.	London, England.	Lumber, general.	6,971	7,330	5,253
Brazil Maru.	3	7.10	3	8.39	3	16.15	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	26.0	Vancouver, B. C.	Gibraltar ¹¹ .	Wheat.	6,977	7,500	5,196
Atlas.	3	10.15	3	13.42	3	16.15	American.	Standard Transp. Co.	450.0	58.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gas oil.	10,631	7,348	5,164
Empire Arrow.	3	16.40	3	15.05	3	23.10	American.	Standard Oil Co. N. Y.	468.3	62.7	25.4	Los Angeles, Calif.	New York, N. Y.	Gas oil.	12,511	9,841	6,946
Scattle ¹¹ .	3	22.30	3	16.48	4	00.15	American.	Hamburg-American Line.	461.5	61.1	25.5	Vancouver, B. C.	Hamburg, Germany.	General.	7,721	9,267	6,854
Mississippi.	3	16.30	3	17.22	4	13.55	French.	French Line.	410.0	52.4	25.0	Corral, Chile.	Le Havre, France.	Nitrate, copper.	7,296	7,156	4,954
Apple Branch.	3	17.30	4	6.08	4	15.55	Swedish.	Ore S. S. Corp.	561.0	72.0	33.5	Cruz Grande, Chile	New York, N. Y.	Iron ore.	21,650	15,560	4,496
Yugoslav.	3	20.30	4	6.21	4	18.35	British.	F. & W. Ritson.	378.0	51.7	24.0	Corral, Chile.	Liverpool, England.	General.	5,822	6,112	3,511
Legion.	3	21.25	4	7.16	4	20.25	American.	Anglo-Chile Nitrate Co.	370.0	53.3	24.0	Talcahuano, Chile.	Azores ¹¹ .	Nitrate of soda.	7,118	5,236	3,987
Caniz.	3	21.25	4	8.30	4	18.45	German.	Roland Line.	440.6	56.2	26.4	Talcahuano, Chile.	Dunkirk, France.	Nitrates, gen.	7,988	7,051	4,776
Witch.	3	23.30	4	8.50	4	20.25	German.	North German Lloyd.	469.8	58.2	26.4	Los Angeles, Calif.	Hamburg, Germany.	General.	7,222	7,816	5,755
Handicap ¹¹ .	4	4.00	4	9.29	4	21.40	Norwegian.	Strange & Co.	415.3	54.7	25.0	Vancouver, B. C.	Bridgeport, Conn.	Lumber.	7,750	7,296	5,445

¹¹ Motor ship.¹² Tanker.

Villager ¹⁰ ...	3 18.00	4 11.42	4 21.45	4 21.45	4 21.45	Westfall, Larsen & Co., United Fruit Co.	398.0	54.7 25.0	Vancouver, B. C., San Francisco, Cal.	Buenos Aires, Arg., Cristobal, C. Z.	General General	3,503 6,869 5,131 695 3,667 2,329
Suriname...	4 14.00	5 6.20	5 14.00	6 9.20	American	U. S. Army	160.2	52.0	Bahoa, C. Z.	Cristobal, C. Z.	Lumber, general	6,631 7,380 5,339
Gen. Wm. M. Graham ¹² ...	5 9.40	5 10.14	5 13.00	5 17.40	American	Amer.-Hawaiian Line	415.0	33.7	Seattle, Wash.	Cristobal, C. Z.	General	632 1,182 742
Alaskan...	5 11.45	5 12.17	5 20.35	7 6.00	Dutch	Royal Neth. S. S. Co.	292.9	33.1	Buenaventura, Col.	Cristobal, C. Z.	General	576 1,572 1,011
Barb...	5 13.00	5 13.39	5 21.35	7 10.20	German	Hamburg-American Line	227.2	34.4	Guayaquil, Ecuador	Cristobal, C. Z.	General	3,246 2,826 1,770
Cerigo...	6 3.30	6 6.45	6 14.55	6 21.05	British	Pacific Steam Nav. Co.	303.4	43.0	Tocopilla, Chile	New York, N. Y.	(13)	
Almagro...	6 10.30	6 13.21	6 19.55	7 2.08	American	Grace Line	480.0	64.0	Valparaiso, Chile	New York, N. Y.	(14)	
Santa...	6 13.45	6 16.30	7 12.10	7 13.20	Belgian	Lloyd Royal Belge	400.0	52.2	Vancouver, B. C.	Antwerp, Belgium	General	3,471 10,637 6,653
Suever...	6 18.00	6 19.13	7 12.00	7 13.45	British	J. N. C. Harrison	395.0	54.0	Iquique, Chile	Azores	Nitrates	6,900 5,740 3,965
Harpalyce...												7,300

* Tanker.

¹¹ Mine planter.¹² Nitrates and copper ore.¹³ Copper, nitrates, and general.¹⁴ All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
November 30.	Caire...	Elders & Pyfies Line	Avonmouth and wayp'ts.	November 30	No. 945-M ¹⁵	Pan American-Grace Airways	Talara via wayp'ts.		
November 30.	Calinares...	United Fruit Co.	Port Limon, Costa Rica.	November 30	Genevieve Lykes	H. Stevenson	Glendegos, Cuba.		
November 30.	Darien C-35 ¹⁵	Leyland S. S. Line	Port Limon, Costa Rica.	November 30	No. 3685 ¹⁵	Pan American Airways	San Salvador and wayp'ts.		
December 1.	Talara	United Fruit Co.	Barranquilla and wayp'ts.	November 30	No. 9137 ¹⁵	Pan American Airways	Miami via wayp'ts.		
December 1.	Lolita ¹⁶	United Fruit Co.	Colon, Rep. of Panama.	November 30	Calinares	United Fruit Co.	New York via Habana.		
December 1.	Artime Martinez	United Fruit Co.	Talara via wayp'ts.	November 30	Mangalena	Elders & Pyfies Line	Havonmouth via wayp'ts.		
December 2.	No. 945-M ¹⁵	Panama R. R. S. S. Line	New York via Haiti	December 1	Darien	Leyland S. S. Line	Liverpool via wayp'ts.		
December 3.	Twives	United Fruit Co.	New Orleans, La.	December 3	No. 9658 ¹⁵	Pan American Airways	San Salvador and wayp'ts.		
December 3.	Tela	Pan American Airways	San Salvador and wayp'ts.	December 3	No. 9776 ¹⁵	Pan American Airways	Miami via wayp'ts.		
December 3.	No. 9655 ¹⁵	Pan American Airways	Miami via Cuba & Pan.	December 4	Tolosa	United Fruit Co.	Port Limon, Costa Rica.		
December 4.	Fidelo	Aluminum Line	New Orleans and wayp'ts.	December 4	No. 300-N ¹⁵	Pan American-Grace Airways	Talara via wayp'ts.		
December 4.	Davision	Leyland S. S. Line	Liverpool via wayp'ts.	December 4	No. 145-M ¹⁵	Pan American Airways	La Guayra and wayp'ts.		
December 4.	Swiftsure	Shell Oil Co.	Cruceao, D. W. I.	December 4	Twives	United Fruit Co.	Bocas, Rep. of Panama.		
December 5.	Bogota	Standard Fruit & S. S. Co.	New Orleans and Habana.	December 5	Fidelo	Pan American Airways	Cartagena, Colombia		
December 5.	Tela	United Fruit Co.	San Salvador and wayp'ts.	December 5	Swiftsure	Leyland S. S. Line	Port Limon, Costa Rica.		
December 6.	No. 300-N ¹⁵	Pan American-Grace Airways	Miami via wayp'ts.	December 6	Darien C-35 ¹⁵	Scadita Airplane Co.	Barranquilla and wayp'ts.		
December 6.	No. 669-M ¹⁵	Pan American Airways	Miami via wayp'ts.	December 6	Annetta I. ¹⁷	A. Tagaropolis	Colon, Rep. of Panama.		
December 6.	No. 9658 ¹⁵	Pan American Airways	San Salvador and wayp'ts.	December 6	Tela	United Fruit Co.	New Orleans and wayp'ts.		
December 6.	No. 145-M ¹⁵	Pan American Airways	La Guayra via wayp'ts.	December 6	Cefalu	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.		
				December 6.	Dora K. ¹⁸	A. L. Surgeon	Bluefields and Pt. Limon.		
				December 6.	Bogota.	Colombian S. S. Line	New York and wayp'ts.		

¹⁵ Motor ship.¹⁶ Motor schooner.¹⁷ Motor boat.

PORT OF BAILEA.

December 2...	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 2...	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.
December 3...	Sambu ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 3...	Sambu ¹⁶	Hans Elliot.	Panama Bay, R. P.
December 4...	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.	December 4...	Real ¹⁶	Hans Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

Tanker Traffic Through the Panama Canal in November, 1930.

During the month of November, 1930, 83 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 457,395, on which tolls of \$402,694.62 were paid. Cargo amounted to 441,841 tons, which included 421,736 tons of mineral oils, 4,102 tons of creosote, and 16,003 tons of molasses.

In point of net tonnage, tanker traffic decreased 19.1 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 13.4 per cent.

Tank vessels comprised 17.3 per cent of the total commercial transits through the Canal during the month; made up 19.3 per cent of the total Panama Canal net tonnage; were the source of 19.2 per cent of the tolls collected; and carried 19.5 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of November, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for November, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	30,232	\$21,767.04	.....
Danzig.....	1	6,127	4,411.44	.....
Dutch.....	1	4,108	4,317.50	7,329
German.....	1	4,435	3,193.20	.....
Norwegian.....	6	31,855	24,563.93	4,178
United States.....	25	142,137	106,134.91	6,847
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, September, 1930.....	50	283,237	209,912.77	15,241
Total, November, 1929.....	50	287,030	211,216.53	19,537
<i>Pacific to Atlantic.</i>				
British.....	7	33,388	36,184.10	60,945
Danish.....	2	9,792	10,103.75	18,376
Danzig.....	1	6,310	6,682.50	11,324
Norwegian.....	3	16,115	17,041.25	31,150
United States.....	30	172,896	168,295.00	301,692
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, September, 1930.....	44	249,972	257,429.74	450,023
Total, November, 1929.....	52	278,572	283,466.37	490,815

¹ Creosote.

² Includes 16,003 tons molasses.

The following tabulation shows the tanker traffic through the Canal during November, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	153,889	\$113,880.43	2,745
United States to South America.....	2	7,652	5,509.44	.....
United States to Balboa.....	1	4,386	4,786.25	4,178
Canada to South America.....	1	7,711	5,551.92	.....
West Indies to United States.....	1	4,108	4,317.50	7,329
Europe to United States.....	7	35,021	25,931.04	4,102
Europe to South America.....	1	6,127	4,411.44	.....

³ Creosote.

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	27	155,738	\$151,856.25	270,324
United States to West Indies.....	3	16,023	17,197.50	30,749
United States to Europe.....	7	36,528	38,701.60	65,387
South America to United States.....	2	7,652	8,223.75	13,840
South America to Canada.....	1	7,711	7,988.75	15,860
South America to Europe.....	1	6,310	6,682.50	11,324
Hawaii to United States.....	2	8,539	7,656.25	*16,003

* Molasses.

Of the tanker traffic passing through the Canal in November, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for November, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
November, 1930.....	33	181,068	\$133,889.22	12,576
October, 1930.....	33	192,300	138,456.00	.....
September, 1930.....	36	210,397	152,995.07	7,999
November, 1929.....	42	245,284	177,967.21	2,335
<i>Pacific to Atlantic.</i>				
November, 1930.....	35	196,698	195,454.10	345,084
October, 1930.....	34	198,336	193,930.29	328,365
September, 1930.....	29	166,508	169,483.10	300,859
November, 1929.....	41	221,317	221,858.27	381,328

Bank Line's Building Program.

According to press reports the new cargo motor ship *Tweedbank*, eighth vessel in a building program of 10 ships constructed for Andrew Weir & Company, recently underwent successful trials. The new vessel was built in Belfast and is of the shelter deck type, 440 feet long, 57 feet beam, and of 5,628 gross tons.

Of the 10 vessels, 4 are steamers and 6 motor ships. The steamers have been completed and are the *Deebank*, *Forthbank*, *Lindenbank* and *Trentbank*. The motor ships are the *Irisbank*, *Taybank*, *Lossiebank*, *Tweedbank*, *Foylebank*, and *Nithbank*, and all except the *Nithbank* are reported completed. The *Foylebank* is due to pass through the Canal during December.

The Bank Line operates from the Atlantic ports of the United States to Far Eastern ports, via the Panama Canal, and return to the Atlantic coast via Suez. It also operates a service with irregular sailings between the Atlantic coast of the United States and Australasia.

Comparison of Canal Traffic in November, 1930, with November Traffic in Previous Years.

The commercial traffic through the Panama Canal during November, 1930, showed a decrease as compared with the previous month, and also decreases in comparison with November in 1927, 1928, and 1929.

In comparison with November, 1929, the 479 transits in November, 1930, are fewer by 46, or 8.8 per cent, than the 525 transits in November of last year, while the net tonnage (Panama Canal measurement), aggregating 2,371,487, was less by 127,419 tons, or 5.1 per cent, than

the total of 2,498,906 tons in November, 1929. The cargo tonnage of 2,263,200 for November, 1930, shows a decline of 271,431 tons, or 10.7 per cent, from the total of 2,534,631 tons passing through the Canal in November, 1929.

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of November each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of November.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	* 89	312,805	446,773	1915.....	* 102	361,197	465,567
1915.....	(+)			1916.....	63	199,687	257,843
1916.....	147	436,058	512,826	1917.....	150	483,213	588,213
1917.....	183	586,519	696,328	1918.....	172	547,839	627,669
1918.....	182	510,533	626,728	1919.....	169	510,416	576,385
1919.....	180	597,148	575,480	1920.....	206	712,170	781,208
1920.....	238	929,875	984,910	1921.....	241	951,323	966,601
1921.....	222	942,411	855,440	1922.....	228	951,455	907,075
1922.....	294	1,337,280	1,426,860	1923.....	331	1,550,482	1,630,656
1923.....	436	2,193,865	2,218,295	1924.....	436	2,179,073	2,249,559
1924.....	384	1,872,531	1,961,593	1925.....	389	1,904,596	1,996,570
1925.....	424	2,028,034	2,023,398	1926.....	433	2,064,549	2,169,787
1926.....	428	2,032,488	2,272,449	1927.....	456	2,185,651	2,312,351
1927.....	559	2,591,717	2,488,882	1928.....	538	2,454,886	2,469,226
1928.....	527	2,468,297	2,501,630	1929.....	534	2,468,483	2,555,250
1929.....	525	2,498,906	2,534,631	1930.....	515	2,498,385	2,502,519
1930.....	479	2,371,487	2,263,200	(+)	490	2,435,204	2,334,641

* Canal opened August 15, 1914.

* Average for 10½ months of fiscal year ended June 30, 1915.

† Canal closed on account of slides.

* Average for first 11 months calendar year 1930.

Traffic by Nationality for November, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for November, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	60	*328,473	237,574	389,323	238,953	\$275,193.46	128,240
Chilean.....	3	10,862	6,837	13,019	7,375	8,546.25	3,527
Colombian.....	5	737	718	1,113	716	869.30	930
Danish.....	4	20,297	12,839	20,845	12,945	16,048.75	13,538
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	6	33,775	23,901	39,808	23,696	29,876.25	20,844
French.....	3	17,938	12,012	20,214	12,288	15,015.00	9,914
German.....	18	60,390	41,299	71,190	42,070	50,043.20	32,187
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	1,244
Japanese.....	5	23,867	21,170	30,884	21,287	24,284.00	23,027
Norwegian.....	17	79,338	56,235	93,132	55,773	60,959.33	25,878
Panamanian.....	2	6,987	3,978	6,624	4,073	4,968.15	4,039
Swedish.....	6	27,386	19,577	50,955	23,502	20,473.90	16,438
United States.....	100	522,897	392,515	640,572	392,426	450,882.30	269,415
Yugoslav.....	1	3,288	2,355	3,718	2,273	2,943.75	4,877
Total, November, 1930...	232	1,148,859	841,183	1,398,460	847,512	970,646.33	554,098
Total, November, 1929...	271	1,326,585	992,754	1,644,234	994,462	1,133,093.79	810,890
Total, November, 1928...	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752

* Includes naval vessel of 5,730 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	73	377,331	278,645	455,066	280,178	\$348,236.05	486,971
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	3,686
Colombian.....	5	881	856	1,285	858	900.20	499
Danish.....	6	27,221	19,687	32,505	19,937	24,603.75	46,752
Danzig.....	1	6,310	5,346	8,940	5,050	6,632.50	11,324
Dutch.....	7	38,092	25,330	42,342	25,463	31,662.50	53,887
French.....	4	25,279	16,691	28,801	17,450	20,863.75	25,324
German.....	19	74,083	51,909	82,868	51,314	64,035.84	98,171
Greek.....	4	14,853	11,271	17,978	11,223	14,088.75	29,780
Italian.....	3	18,015	13,220	24,667	13,974	16,525.00	13,878
Japanese.....	6	32,291	25,079	40,608	24,320	31,348.75	32,050
Norwegian.....	11	58,210	40,555	67,006	41,383	50,693.75	87,788
Panamanian.....	2	262	225	612	229	188.64	.....
Spanish.....	2	5,188	4,477	6,910	4,230	5,596.25	10,500
Swedish.....	6	26,809	18,482	39,792	23,006	23,102.50	55,943
United States.....	96	503,943	334,854	630,270	386,408	480,749.05	739,853
Yugoslav.....	1	4,188	3,310	5,150	3,281	4,137.50	7,660
Total, November, 1930...	247	1,222,628	903,370	1,492,110	912,260	1,127,711.03	1,709,102
Total, November, 1929...	254	1,172,321	890,898	1,471,806	892,539	1,111,802.15	1,723,741
Total, November, 1928...	252	1,128,257	866,882	1,426,832	872,177	1,081,676.24	1,720,878

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	133	705,804	516,219	844,389	519,131	\$623,429.51	615,211
Chilean.....	4	15,534	10,270	20,329	11,351	12,837.50	7,213
Colombian.....	10	1,618	1,574	2,398	1,574	1,769.50	1,429
Danish.....	10	47,518	32,526	53,350	32,882	40,657.50	60,296
Danzig.....	2	12,437	10,614	17,879	10,077	11,093.94	11,324
Dutch.....	13	71,867	49,231	82,150	29,159	61,638.75	74,731
French.....	7	43,217	28,703	49,015	29,738	35,878.75	35,238
German.....	37	134,473	93,203	154,058	93,334	114,079.04	130,358
Greek.....	4	14,853	11,271	17,978	11,223	14,088.75	29,780
Italian.....	4	24,512	18,125	32,791	19,102	22,656.25	20,122
Japanese.....	11	56,158	46,249	71,492	45,607	55,632.75	55,107
Norwegian.....	28	137,548	96,790	160,138	97,156	111,663.08	113,666
Panamanian.....	4	7,249	4,203	7,236	4,302	6,156.79	4,039
Spanish.....	2	5,188	4,477	6,910	4,230	6,596.25	10,500
Swedish.....	12	54,195	38,059	90,747	46,508	43,676.40	72,381
United States.....	196	1,031,840	777,369	1,270,842	778,834	931,631.35	1,009,268
Yugoslav.....	2	7,476	5,665	8,868	5,554	7,081.25	12,537
Total, November, 1930...	479	2,371,487	1,744,553	2,890,570	1,759,792	2,098,357.36	2,263,200
Total, November, 1929...	525	2,498,906	1,883,652	3,116,040	1,887,001	2,244,895.94	2,534,631
Total, November, 1928...	527	2,468,297	1,877,058	3,078,578	1,882,770	2,225,937.48	2,501,630

* Includes naval vessel of 5,730 displacement tons.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca.....	National Navigation Co.....	December 1...	December 1...	.....	31
Buenos Aires.....	Johnson Line.....	December 1...	December 1...	165	.....
Acajutla.....	Pacific Steam Navigation Co.....	December 2...	December 2...	3	.....
Sanyo Maru.....	Sanyosha Goshi Kaisha.....	December 2...	December 3...	213	.....
Guatemala.....	Panama Mail S. S. Co.....	December 2...	December 3...	(1)	.....
Ecuador.....	Panama Mail S. S. Co.....	December 2...	December 3...	12	.....
Villanger.....	Westfal, Larsen & Co.....	December 3...	December 4...	175	.....
Suriname.....	United Fruit Co.....	December 4...	December 5...	228	.....
Nosa Chief.....	N. O. & S. A. S. S. Co.....	December 6...	December 7...	.....	189

* 43 tons and 1 automobile.

United States Intercoastal Traffic by Commodities for November, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for November, 1930, and the totals for November, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Aeroplanes.....	9	8	17
Agricultural implements.....	1,201	75	1,276
Alfalfa.....		1,893	1,893
Alfalfa meal.....		1,175	1,175
Ammonia.....	36		36
Asbestos.....	732		732
Asphalt.....	144	125	269
Automobiles.....	2,973	81	3,054
Automobile accessories.....	3,835	59	3,894
Bamboo.....		12	12
Bark.....		120	120
Barley.....		582	582
Beans.....	408	5,554	5,962
Bones and bonemeal.....		78	78
Borax.....		687	687
Bricks.....	604		604
Burlap.....	78	62	140
Calcium carbide.....	75		75
Camphor.....		17	17
Canned:			
Fish.....	232	7,470	7,702
Fruit.....	575	33,333	33,908
Meat.....	183	206	389
Milk.....	45	454	499
Soup.....	1,359		1,359
Vegetables.....	771	8,542	9,313
Miscellaneous.....	1,500	6,460	8,020
Carbon black.....	51		51
Celite filtercel.....		452	452
Cement.....	129	5	124
Charcoal.....	38		38
Chemicals.....	1,198	789	1,987
China and fire clay.....	60	62	122
Coal.....	1,500		1,500
Cocoa.....	75		75
Coconuts.....		492	492
Coffee.....	333	127	460
Coke.....	660		660
Cold storage:			
Beef.....	69		69
Cheese.....		35	35
Eggs.....	200	4	204
Fish.....	34		34
Other.....	1,112		1,112
Confectionery.....	405		405
Copra.....	71	7	78
Cork.....			
Cotton.....	919	1,482	2,401
Cyanide.....	51		51
Drugs.....	1,395	560	1,955
Earthenware.....	226	40	266
Eggs, dried.....		34	34
Explosives.....	35		35
Fish meal.....	22		22
Flour.....	151	6,026	6,177
Fruit:			
Dried.....	205	16,736	16,941
Fresh.....		21	21
Fuller's earth.....	57		57
Furniture.....	673	91	764
General.....	47,904	11,559	59,463
Glass and glassware.....	946	223	1,169
Glue.....		40	40
Hair.....	12	65	77
Hardwoods.....	636	85	721
Hay.....		2,431	2,431

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hemp.....	68	226	294
Honey.....		286	286
Hops.....		100	100
Infusorial earth.....		385	385
Ink.....	28		28
Lard substitute.....	1,551		1,551
Leather.....		2	2
Linoleum.....	390		390
Liquors.....	117	114	231
Lumber.....	707	131,219	131,926
Malt.....	33	7	40
Manufactured goods:			
Iron and steel.....	64,818	991	65,809
Machinery.....	6,550	352	6,902
Railroad material.....	211		211
Tinplate.....	7,356		7,356
Textiles.....	2,073	141	2,214
Miscellaneous.....	4,120	3,075	7,195
Marble.....	10		10
Matches.....	207		207
Metals:			
Copper.....		3,153	3,153
Iron.....	1,712		1,712
Lead.....	25	447	472
Scrap.....	305	177	482
Tin.....		28	28
Zinc.....		489	489
Milk, powdered.....		597	597
Molasses.....	168		168
Musical instruments.....	30		30
Nuts.....		362	362
Oats.....	72	100	172
Oils:			
Crude.....	52		52
Gas oil, fuel oil.....		46,133	46,133
Gasoline, benzine, naphtha.....	11	223,291	223,302
Lubricating and greases.....	5,291	266	5,557
Olive.....	3		3
Vegetable.....	269	53	322
Whale.....		12	12
Wood.....	5		5
Other.....	31		31
Ores:			
Copper.....		1,400	1,400
Iron.....	31		31
Magnesite.....		54	54
Manganese.....	55		55
Paint.....	375	1,033	1,408
Paper.....	5,468	9,415	14,883
Paper pulp.....		8,405	8,405
Paper roofing.....	75		75
Peanuts.....	13	25	38
Peas.....		31	31
Phosphates.....	1,231		1,231
Porcelain.....	263	175	438
Rags.....		247	247
Rice.....	1,360	4	1,364
Rope.....	53	60	113
Rosin.....	493		493
Rubber:			
Manufactured.....	546	87	633
Scrap.....		50	50
Salt.....	133		133
Sand.....	748		748
Seeds:			
Grass.....		197	197
Hemp.....		24	24
Other.....		423	423
Shells.....	821		821
Silk.....		1,268	1,268
Skins and hides.....		1,874	1,874
Slate.....	703		703
Soap.....	2,813	57	2,870
Soda.....	567		567
Soda ash.....	741		741
Soda, bicarbonate.....	171		171
Soda, caustic.....	154		154
Starch.....	59		59
Sugar.....	28	4,445	4,473
Sulphur.....	4,600		4,600
Syrup.....	60		60
Talc.....		44	44
Tallow.....		293	293
Tar.....	107		107
Tea.....		13	13

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Tobacco.....	1,445	61	1,506
Toys.....	35		35
Turpentine.....	15		15
Vegetables.....	65	8	73
Waste.....		95	95
Wax.....	74		74
Wheat.....		559	559
Wine.....	6	244	250
Wool.....		1,639	1,639
Zinc oxide.....	44		44
Total, November, 1930.....	193,552	552,595	746,147
Total, November, 1929.....	283,399	679,156	962,555
Total, November, 1928.....	234,851	638,489	873,340

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending November 30, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. S. S. Line.....		November 23.....		697
Calif.....	North German Lloyd.....		November 23.....		234
Bolivar.....	United Fruit Co.....		November 23.....		52
Ulua.....	United Fruit Co.....	November 23.....	November 23.....	38	441
Swiftscoot.....	C. D. Mallory & Co.....	November 23.....	November 24.....	11,698	(¹)
Canadian Leader.....	Canadian National Steamships.....	November 24.....	November 24.....	112	(²)
Santa Teresa.....	Grace Line.....	November 24.....	November 24.....	268	(²)
Damsterdijk.....	Holland-America Line.....	November 24.....	November 24.....	(¹)	5
Moveria.....	Donaldson Bros.....	November 24.....	November 25.....	(¹)	185
Calamares.....	United Fruit Co.....	November 24.....	November 26.....	478	43 ³
Juan S. Elcano.....	Spanish Line.....		November 25.....		611
Simon Bolivar.....	Royal Netherlands S. S. Co.....	November 25.....	November 25.....	230	(¹)
Spreewald.....	Hamburg-American Line.....	November 25.....	November 25.....	18	148
Theodore Roosevelt.....	Fred Olsen & Co.....	November 25.....	November 25.....	1	32
Amsterdam.....	Royal Netherlands S. S. Co.....	November 25.....	November 26.....	186	10
Cuba.....	French Line.....	November 25.....	November 28.....	133	233
Santa Clara.....	Grace Line.....	November 26.....	November 26.....	150	132
Teno.....	Chilean Line.....	November 26.....	November 26.....	76	(¹)
Nosa Prince.....	N. O. & S. A. S. S. Co.....	November 26.....	November 27.....	500	166
Zacapa.....	United Fruit Co.....	November 26.....	November 27.....	458	374
Vancouver.....	Hamburg-American Line.....	November 26.....	November 26.....	26	10
Magdalena.....	Hamburg-American Line.....	November 26.....	November 26.....	126	(¹)
Irióna.....	United Fruit Co.....	November 26.....	November 27.....	844	4
Tai Yang.....	Barber S. S. Line.....	November 26.....	November 27.....	116	49
Washington.....	French Line.....	November 26.....	November 27.....	113	132
Alkmaar.....	Royal Netherlands S. S. Co.....	November 27.....	November 27.....	158	19
Darian.....	Leyland S. S. Line.....	November 27.....	November 28.....	452	(¹)
Caldas.....	National Navigation Co.....		November 28.....		150
Lochgair.....	Pacific Steam Navigation Co.....	November 28.....	November 29.....	88	118
Orduna.....	Pacific Steam Navigation Co.....	November 28.....	November 29.....	3	(¹)
Simon Bolivar.....	Royal Netherlands S. S. Co.....	November 28.....	November 29.....	3	139
Amapala.....	Standard Fruit & S. S. Co.....	November 28.....	November 29.....	268	366
Annie Johnson.....	Johnson S. S. Line.....	November 28.....	November 29.....	(¹)	100
Durazzo.....	Hamburg-American Line.....	November 28.....	November 30.....	542	10
Tacoma.....	Hamburg-American Line.....	November 28.....	November 30.....	27	486
Manizales.....	North German Lloyd.....	November 28.....	November 30.....	613 ³	59
Buenaventura.....	Panama R. R. S. S. Line.....	November 28.....	November 30.....	730	18
Pearl Marie.....	R. Feuillebois.....	November 29.....	November 29.....	(¹)	20
Irióna.....	United Fruit Co.....	November 29.....	November 29.....	(¹)	261
Poseidon.....	Hamburg-American Line.....	November 29.....	November 29.....	41	(¹)
San Rafael.....	Quaker S. S. Line.....	November 29.....	November 29.....	35	(¹)
Baracao.....	United Fruit Co.....	November 29.....	November 29.....	79	52
Nietheroy.....	Pacific Steam Navigation Co.....	November 29.....	November 30.....	315	120
Magdalena.....	Hamburg-American Line.....	November 29.....	November 30.....	(¹)	377
Calamares.....	United Fruit Co.....	November 30.....	November 30.....	11	509
Buenos Aires.....	Johnson S. S. Line.....	November 30.....		106	
Colombo.....	Italian S. S. Line.....	November 30.....		79	
Cauca.....	National Navigation Co.....	November 30.....	November 30.....	180	257
Canadian Highlander.....	Canadian National Steamships.....	November 30.....	November 30.....	43	(¹)
Salvador.....	Pacific Steam Navigation Co.....		November 30.....		734

¹ No cargo discharged.² No cargo laded.³ One package

Ships' Chandlery Supplies.

Panama Canal storehouses stock a complete line of ships' chandlery supplies available for sale

to shipping at cost prices plus 25 per cent surcharge, which surcharge includes freight, handling, and other costs.

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Volume XXIV. Balboa Heights, C. Z., December 17, 1930. No. 20.

Cargo Through the Canal During November, 1930.

On pages 284 and 285 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in November, 1930. This cargo, segregated according to direction, as compared with November, 1929, and the differences, are shown in the following tabulation:

	November, 1929.	November, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	810,890	554,098	-256,792
Pacific to Atlantic.....	1,723,741	1,709,102	-14,639
Total.....	2,534,631	2,263,200	-271,431

It will be noted above that the Atlantic to Pacific tonnage decreased 256,792 tons (31.7 per cent), as compared with November, 1929, and that from the Pacific to the Atlantic decreased 14,639 tons (0.85 per cent), making a total decrease of cargo tonnage in both directions of 271,431 tons (10.7 per cent). As has been pointed out in several previous reports the general decline in Pacific-bound tonnage has been due to a general curtailment in shipments in this direction. These shipments reached a particularly low ebb last month when the tonnage in this direction was the lightest since August, 1924, when 531,703 long tons were passed through. Tonnage in the opposite direction showed less than 1 per cent decrease under November, 1929, accounted for by increases in the shipments of several important food commodities, which almost completely absorbed the losses in other important products.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and three-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 28.9 per cent in Europe. Tonnage from the United States decreased 200,544 tons (36.4 per cent) in comparison with November, 1929, and that from Europe declined 31,873 tons (16.6 per cent). The proportion of the total tonnage originating in the United States was also lower in November, 1930, than in November, 1929, while the proportionate amount coming from Europe was greater.

Destination.—Forty-six per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.7 per cent to Asia; 15.9 per cent to South America; and 10.1 per cent to Australasia. Tonnage to all these areas declined as compared with November, 1929, as follows: To the United States, 92,004 tons (26.5 per cent); to Asia, 75,073 tons (40.6 per cent); to South America, 35,194 tons (28.6 per cent); and to Australasia, 45,092 tons (44.7 per cent). With respect to the

porportion of the cargo tonnage to these various areas to the total Pacific-bound tonnage, increases were registered in that to United States and South America, while that to Asia and Australasia decreased.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 50.3 per cent came from the United States; 28.3 per cent from South America; 13.9 per cent from Canada; 3.9 per cent from Australasia; and 2.6 per cent from Asia. The amounts coming from Canada, Australasia, and Asia showed relative as well as actual increases of 67,811 tons (40.1 per cent); 30,938 tons (85.4 per cent); and 9,455 tons (27.1 per cent), respectively, as compared with November, 1929. Tonnage from the United States and South America decreased relatively as well as in actual tonnage in the amounts of 102,780 tons (10.7 per cent) and 35,178 tons (6.8 per cent). The large increase in the shipments of wheat was principally responsible for the large increase of cargo originating in Canada.

Destination.—Segregated according to destination, 47.4 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 48.2 per cent to Europe. Tonnage to Europe increased 174,374 tons (26.8 per cent) as compared with November, 1929, as did the percentage of the total. That to the United States decreased 178,089 tons (18 per cent) in comparison with November, 1929. The decreased tonnage to the United States was principally due to curtailed shipments of mineral oils, lumber, and ores (principally iron), while the increase to Europe was accounted for principally by larger shipments of grain and fresh fruits from the Pacific Northwest.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 83 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 17 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for November, 1929, or November, 1930, are listed in the following tabulation, showing differences:

Commodity.	November, 1929.	November 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	17,802	10,165	-7,637
Automobiles.....	18,983	4,552	-14,431
Cement.....	36,536	24,885	-11,651
Coal and coke.....	28,844	11,182	-17,662
Cotton.....	39,360	25,819	-13,541
Manufactured goods:			
Iron and steel.....	199,394	109,209	-90,185
Machinery.....	15,637	15,236	-401
Railroad material.....	15,702	7,250	-8,452
Tinplate.....	20,246	19,856	-390
Textiles.....	10,347	6,013	-4,334
Miscellaneous.....	17,682	8,608	-9,074
Mineral oils.....	46,057	39,342	-6,715
Paper.....	18,988	13,202	-5,786
Phosphates.....	23,202	21,451	-1,751
Sulphur.....	13,225	4,607	-8,618
Tobacco.....	10,861	8,625	-2,236

The above 16 commodity groups for November, 1930, comprise 59.5 per cent of the cargo moving from the Atlantic to the Pacific. All of the items showed decreases in comparison with November, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify almost 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of November, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	November, 1929.	November, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	22,210	20,944	-1,266
Beans.....	10,145	6,941	-3,204
Canned goods (fish, fruit, vegetables, etc.).....	98,019	93,928	-4,091
Cold storage (food products).....	15,938	24,827	+8,889
Cotton.....	10,929	7,991	-2,938
Flour.....	8,298	10,102	+1,804
Fruit, dried.....	40,793	46,693	+5,900
Fruit, fresh.....	14,405	38,367	+23,962
Lumber.....	266,994	195,273	-71,721
Metals, various.....	62,422	45,443	-16,979
Nitrates.....	211,554	226,197	+14,643
Oils, mineral.....	485,533	408,065	-77,518
Ores (principally iron).....	183,667	137,429	-46,238
Paper.....	6,989	11,216	+4,227
Paper pulp.....	6,948	11,139	+4,191
Sugar.....	35,639	69,724	+34,085
Wheat.....	121,984	221,309	+99,325

* Does not include fresh fruit.

The above 17 commodity groups for November, 1930, comprise 92.2 per cent of the cargo moving from the Pacific to the Atlantic. Nine of the items showed increases and 8 decreases. The heaviest increases were in shipments of wheat, fresh fruits, and sugar, while mineral oils, lumber, and ores (principally iron) registered rather heavy decreases.

(Continued on next page.)

New Libera Liner Due Here on December 26.

The passenger and cargo steamer *California*, acquired some months ago by the Navigazione Libera Triestina (Libera Line) from the Cunard Line, is due to arrive at Cristobal on December 26, 1930, on her maiden voyage in the former company's service between Mediterranean ports and the Pacific coast of North America. The new vessel, which is 523 feet long, 64 feet beam, and of 12,768 gross tons, 20,000 tons displacement, is to be operated at a speed of 14 knots, and will afford a 25-day service between Mediterranean ports and the Pacific coast. Accommodations are provided for 138 first-class and 24 second-class passengers.

On her homeward journey from the Pacific coast, the new vessel is to be utilized by the American Express Company in the initial phase of a comprehensive tour of Southern Europe. The party will sail from Pacific coast ports in January next, after the vessel has made calls at Vancouver, Portland, San Francisco, and Los Angeles, sailing from the latter port January 30th.

The *California* is the largest vessel yet to be placed in the service between Europe and the Pacific coast of North America, which ranks as the second largest trade serving the Panama Canal. The vessel, which was formerly the *Albania*, was previously operated in the trans-Atlantic service.

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, November, 1930.—Continued from page 283.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.				ASIA.				Grand total.	Per cent of total cargo.	
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. *	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. †	Total, South America.	Australia.	New Zealand.	Australasia. ‡	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East. †			Total, Asia.
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports.....	156,462	355	693	46	7,268	164,824	6,633	9371	1,147	1,634	8,007	18,358	4,622	3,095	41	7,758	12,763	8,091	11,940	19,795	52,589	243,529	44.0
South Atlantic ports.....	1,667				1,667	1,667												827	779	3,381	5,143	7,203	1.3
Gulf ports.....	35,423			5,323	40,746	40,746	3,857	88	271	666	104	4,936	3,117			3,117	395	1,077	22,843	27,072	51,387	100,236	18.0
Total, United States.....	193,552	355	693	5,369	7,268	207,227	10,490	1,025	1,418	2,300	8,111	23,344	8,134	3,095	41	11,270	13,314	9,995	35,562	50,248	109,119	350,970	63.3
East coast of Canada.....		3,590				3,590												650				650	1.4
East coast of Central America.....							2,101					2,101										2,101	0.4
Cristobal, C. Z. *	3,623		4,844			8,467	2,148	1,324	797	329	534	5,132										13,599	2.5
West Indies.....	145	68		7,329		7,542	9					9										7,551	1.4
Total, North America.....	197,320	4,013	5,537	12,698	7,268	226,836	14,748	2,349	2,215	2,629	8,645	30,586	8,134	7,023	41	15,198	13,314	10,645	35,562	50,248	109,769	382,389	69.0
EUROPE:																							
British Isles.....	10,180	4,431				14,611	12,606	47	909	2,613	4,239	20,414				30,770	1,167	31,937				66,962	12.1
Belgium.....	10,223	1,252				11,475	2,083	2,193	21	318	1,051	3,583										16,786	3.1
Denmark.....		76				76	82															84	0.0
France.....	3,602	49	55			3,706	1,608			36		1,644				3,694	3,694					9,044	1.6
Germany.....	4,583	23	1,328			4,819	10,753	5,971	20	10	77	730	6,808									17,561	3.2
Holland.....	6,774	417		24		7,215	6,479	114	10	123	7,816											15,031	2.7
Italy.....	549	33	97			679	1,922															679	0.1
Norway and Sweden.....	946			1,036	4	2,036						1,922	4,473	400		4,873						8,331	1.6
Spain and Portugal.....	457	29	13			499					2	165	167									666	0.1
Europe *.....	9,350	113				9,463	1,335				13,541	14,876										24,339	4.4
Total, Europe.....	46,740	6,353	1,493	1,110	6,551	62,247	32,114	202	929	4,259	19,726	57,230	4,473	31,170	4,863	40,506						159,983	28.9
East coast of South America.....		600				11,669						57										11,726	2.1
Grand total.....	255,129	10,966	7,030	13,808	13,819	300,752	46,862	2,608	3,144	6,838	28,371	87,873	12,607	38,193	4,904	55,704	13,314	10,645	35,562	50,248	109,769	354,095	100.0
Per cent of total cargo:																							
November, 1930.....	46.0	2.0	1.3	2.5	2.5	54.3	8.5	0.5	0.6	1.2	5.1	15.9	2.3	6.9	0.9	10.1	2.4	1.9	6.4	9.0	19.7	100.0	.....
November, 1929.....	42.8	2.5	3.0	0.6	0.7	49.6	8.3	1.0	0.4	2.0	3.5	15.2	4.8	5.8	1.7	12.3	2.0	4.4	14.1	2.4	22.9	100.0	.....
November, 1928.....	39.5	1.6	1.3		1.9	44.3	5.9	1.6	0.4	1.8	5.5	15.2	4.5	4.8	0.6	9.9	1.9	6.4	15.5	6.8	30.6	100.0	.....

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo. ‡

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, November, 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.							EUROPE.												Grand total.	Per cent of total cargo.				
	UNITED STATES.				NORTH AMERICA.			EUROPE.																	
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z. ^a	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	Egypt.			
NORTH AMERICA:																									
West coast of United States	507,698	5,497,390	400,552	595			1,130,411	210,594	935,116	513	1,519	407,132	976,366	398,108	10,840	6,033	16,014	15	60,703	262,424	270		857,029	50.3	
West coast of Canada	24,563		1,225	25,788			1,161	1,913	27,862	113,046	6,782	132	6,386	5,891	9,090	723	11,326		54,991	203,367	556		236,785	13.9	
West coast of Cen. Amer.	417			417			1,105	201	1,306	7				432	84				137	660	76		2,459	0.1	
Bahama, C. Z.				294					294														294		
Hawaiian Islands				16,138	16,138				16,138														16,138	0.9	
Total, North America	532,678	5,497,575	401,595	595,232			2,396,433	324,640	952,229	566	8,301	539,203	976,427	398,108	20,014	6,762	27,340	15	115,831	471,451	902		1,113,305	65.2	
SOUTH AMERICA:																									
Chile	120,939	9,114	8,223	138,276			136	459	138,871	13,202	1,933	1,640	5,718	3,340	254	4,543	381		432	206	162	237	605	376,476	22.0
Colombia	2,109			2,109			2,869	17	4,995					159						159				5,154	0.3
Ecuador	14,359			14,359			2,093		16,452	82						385		75		32	574	556		17,582	1.0
Peru	4,966			4,966	15,860		617	36	21,479	26,566	1,081	100	7,795	13,305	2,657				9,187	60,691			82,170	4.8	
West coast of S. America	58			58			1,657		1,715					636		30			494	1,160			2,875	0.2	
Total, South America	142,431	9,114	8,223	159,708	15,860		7,372	512	183,512	39,750	3,014	1,740	13,613	17,440	2,911	4,958	381		507	215,875	300,189	556		484,257	28.3
AUSTRALASIA:																									
Australia	9,510			9,510	2,785		82		12,377	27,335														12,377	0.7
New Zealand	835			835	108		75		1,018															28,333	1.7
Australasia ¹	8,390			8,390					8,390	7,380			2,910							7,850	18,140			26,440	1.5
Total, Australasia	18,645			18,645	2,893		157		21,695	34,715			2,910							7,850	45,475			67,170	3.9
ASIA:																									
Philippine Islands	17,506			9,500	27,006				27,006															27,006	1.7
China	3,565			256	3,821		194		4,015															4,015	0.2
Japan	3,970			3,970			62		4,032															4,032	0.2
Far East ¹	2,111			206	2,317				2,317	7,000										7,000				9,317	0.5
Total, Asia	27,152			9,962	37,114		256		37,370	7,000										7,000				44,370	2.6
Grand total	720,906	14,611	75	242,810	18,753		10,181	43,886	883,529	311,031	11,315	2,279	36,885	60,161	22,925	11,720	27,721	522	339,556	824,115	1,458		1,709,102	100.0	
Per cent of total cargo:																									
November, 1930	42.1	0.9	4.4	47.4	1.1		0.6	2.6	51.7	18.2	0.7	0.1	2.2	3.5	1.3	0.7	1.6		19.9	48.2	0.1		100.0		
November, 1929	51.8	1.6	4.0	57.4	1.8	0.2	0.7	1.5	61.6	15.1	1.3	0.1	1.7	4.1	0.4	1.0	1.2	0.1	12.7	37.7	0.3	0.4	100.0		
November, 1928	46.4	0.6	3.3	50.3	1.4	0.5	1.3	2.1	55.6	19.4	1.4	0.1	2.4	2.9	3.0	0.6	0.8	2.8	10.5	43.9	0.5		100.0		

^a General cargo not routed so as to allow segregation between definite ports.¹ Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, December, 13, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Cleared for sea.	Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Barclay.	5	20.00	7	13.57	7	15.10	Dutch.	Royal Neth. S. S. Co.	202.0	33.1	11.0	Cristobal, C. Z.	Guyaquil, Ecuador	General.	70	1,183	742
Kreta.	6	20.45	7	13.54	7	22.58	German.	Hamburg-American Line	309.8	44.1	18.2	Hamburg, Germany	Champerico, Guat.	General.	1,709	3,397	2,337
Siamese.																	
Prince.	6	19.35	7	13.04	7	14.05	British.	Princess Line, Ltd.	441.5	60.0	19.10	New York, N. Y.	Manila, P. I.	General.	1,311	9,283	6,401
Huntingdon.	6	20.20	7	14.48	7	18.40	British.	Federal Steam Nav. Co.	520.0	64.0	21.7	Falmouth, Eng.	Wellington, N. Z.	Ballast.		12,945	9,378
City of Lille.	6	22.25	7	14.26	7	18.50	British.	Ellerman & Bucknall.	448.0	58.0	19.4	Norfolk, Va.	Yokohama, Japan.	General.	1,178	8,555	6,167
Iowan.	6	23.00	7	14.26	7	18.40	American.	Amer-Hawaiian Line.	407.7	53.7	18.6	Boston, Mass.	Portland, Oreg.	General.	2,499	7,079	5,028
Cerigo.	5	21.35	7	13.32	7	19.46	German.	Hamburg-American Line.	227.2	34.4	14.10	Cristobal, C. Z.	Guyaquil, Ecuador	General.	276	1,572	1,011
Tatsuhia Maru.	7	00.25	7	18.25	7	19.39	Japanese.	Tatsuhia Kisen Kaisha	423.5	55.0	23.1	Boca Grande, Fla.	Shanghai, China.	(6)	6,520	6,763	4,939
Tai Pung.	7	5.40	7	12.20	7	20.18	Norwegian.	Barber S. S. Line.	401.0	60.0	19.10	New York, N. Y.	Shanghai, China.	General.	2,097	9,894	6,829
Hindanger.	7	14.30	7	22.48	8	00.20	Norwegian.	Westfal, Larsen & Co.	393.0	54.9	20.0	San Nicolas, Arg.	Vancouver, B. C.	(7)	3,534	6,854	5,287
Somerby.	7	18.35	8	13.34	8	14.40	British.	Sir R. Ropner & Co.	421.0	54.3	20.9	Houston, Texas	Kobe, Japan.	(8)	4,412	6,352	4,628
New West-																	
minister City.	7	23.40	8	14.04	8	16.15	British.	Sir W. R. Smith & Sons	400.5	54.3	17.6	New Orleans, La.	Kobe, Japan.	General.	3,718	7,000	5,407
Mallard.	8	6.20	8	15.45	8	16.05	American.	U. S. Navy.	180.0	33.6		Cristobal, C. Z.	Balboa, C. Z.	General.	1,846	5,760	3,866
Pear Branch.	8	2.40	8	15.00	8	16.05	British.	F. & W. Ritson.	395.6	53.8	18.6	Glasgow, Scotland	Valparaiso, Chile.	General.	1,200	7,209	5,172
New Orleans.	8	6.45	8	15.20	8	21.00	American.	Roosevelt S. S. Co., S. B.	335.0	55.0	17.0	Cristobal, C. Z.	Fremantle, Aust. lia	General.			
Asheville.	26	19.20	8	17.20	8	17.20	American.	U. S. Navy.	235.0	41.2		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-12.			8	9.00	8	17.12	American.	U. S. Navy.	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-15.			8	9.00	8	17.12	American.	U. S. Navy.	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Mobile City.	8	6.55	8	9.05	8	16.52	American.	Isthmian S. S. Lines.	355.6	55.0	24.10	New York, N. Y.	Seattle, Wash.	Steel, general.	7,316	7,330	5,241
Mary D.	8	11.45	8	20.13	8	21.20	American.	Strange & Co.	380.2	53.1	13.0	Baltimore, Md.	Bellingham, Wash.	Ballast.		5,516	3,943
Eastern Sun.	8	14.20	8	14.30	8	23.48	American.	Sun Oil Co.	430.0	66.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	4,039	9,607	6,581
Barneveld.	8	14.25	9	13.23	10	2.40	Dutch.	Royal Neth. S. S. Co.	400.0	58.3	22.6	Hamburg, Germany	Corral, Chile	General.	1,478	7,820	5,380
Willpolo.	9	2.50	9	6.35	9	13.38	American.	Williams S. S. Line	336.8	52.2	14.3	Baltimore, Md.	Seattle, Wash.	General.	1,135	5,080	4,080
Steel Traveler.	9	6.00	9	7.35	9	15.32	American.	Isthmian S. S. Lines.	424.0	56.0	26.3	Philadelphia, Pa.	Singapore, Str. Set.	General.	8,317	7,093	5,509
Canadian.																	
Saigneur.	9	6.30	9	7.40	9	16.12	British.	Can. Nat. Steamships	400.0	52.0	19.9	Montreal, Canada.	Vancouver, B. C.	General.	3,550	5,893	4,182
S-16.	8	22.45	9	7.45	9	14.43	American.	U. S. Navy.	231.0	21.10		Cristobal, C. Z.	Balboa, C. Z.	Ballast.		15,125	4,421
Sweland.	8	22.45	9	9.05	9	17.03	Swedish.	Ore S. S. Corp.	561.1	72.2	23.6	New York, N. Y.	Crus Grande, Chile	Ballast.		15,125	4,421
Nubra.	9	6.40	9	10.40	9	19.11	American.	Calmar S. S. Corp.	450.6	57.2	28.6	Baltimore, Md.	Seattle, Wash.	Steel, general.	10,300	8,013	4,683
Coburn.	9	7.15	9	12.20	9	21.00	American.	Amer-Hawaiian Line.	471.0	59.6	16.8	Boston, Mass.	Seattle, Wash.	General.	1,449	9,032	6,168
Donau.	8	15.50	9	13.20	9	22.54	German.	North German Lloyd	521.0	64.0	23.0	Hamburg, Germany	Vancouver, B. C.	General.	2,021	11,007	7,098
Susan V.																	
Lukenbach.	9	16.55	9	19.55	10	10.21	American.	Lukenbach Line.	434.0	57.0	18.9	New York, N. Y.	Seattle, Wash.	General.	3,287	7,947	5,688
France Maru.	9	20.50	10	9.38	10	15.10	Japanese.	Kokusai Kisen Kaisha.	335.0	51.0	26.10	Montreal, Canada.	Kobe, Japan.	Wheat, alum um.	7,491	6,900	5,638
Inverbank.	9	21.30	10	6.20	10	14.15	British.	Andrew Weir & Co.	420.0	53.9	14.8	New York, N. Y.	Cieta Buena, Chile	Ballast.		7,091	5,014

¹ Maize, coffee, bran, and fertilizer.

² Phosphate, cotton, and carbon black.

³ Submarine.

⁴ Gunboat.

⁵ Mines sweeper.

⁶ Towing pontoon.

⁷ Motor ship.

⁸ Cotton and carbon black.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Artisan	7	4 00	7	8 49	7	19 30	7	19 30	American	Shell Eastern Pet. Prod.	433.6	56.2	28.0	Fall River, Mass.	(*)	10 397	7 426	5 073
Callina	7	3 30	7	9 30	7	21 45	7	21 45	Italian	Nav. Libera Trieste	436.6	55.4	26.5	Trieste, Italy	Wheat, general	8 856	7 790	6 010
William	7	15 15	7	15 57	7	23 20	7	23 20	American	Williams S. S. Line	306.8	52.2	23.0	Baltimore, Md	Lumber, general	5 600	5 684	4 070
Snyder	7	17 00	8	6 23	8	13 50	8	13 50	Norwegian	Pet. Stor. & Fin. Corp.	408.3	55.3	28.2	Azores	Gasoline	8 442	6 466	4 336
Silver Arrow	7	17 50	8	7 05	8	13 45	8	13 45	American	Standard Transp. Co.	467.6	57.2	28.4	New York, N. Y.	(*)	12 512	9 698	6 862
Holmes	7	18 41	8	7 32	8	17 45	8	17 45	American	Arrow Line	409.6	54.2	24.0	Baltimore, Md	Lumber	7 500	6 667	4 949
Whitaker	7	20 15	8	7 58	8	16 40	8	16 40	British	Royal Mail S. P. Co.	455.6	62.2	29.0	Rotterdam, Holland	General	8 078	10 772	7 381
Lochmonar	7	21 00	8	8 18	8	18 40	8	18 40	American	Panama S. S. Co.	440.0	56.0	28.3	Baltimore, Md	Lumber	8 000	8 324	6 036
Petona	7	23 00	8	8 52	8	19 35	8	19 35	German	Hamburg-Amerikanische	453.6	58.1	24.0	Hamburg, Germany	General	8 352	8 071	5 952
Point Reyes	8	6 50	8	9 21	8	20 15	8	20 15	American	Gulf Pac. Redwood Line	324.0	46.2	21.1	New Orleans, La.	Lumber, general	3 498	3 984	2 617
Temple Lane	8	6 00	8	9 52	8	20 45	8	21 45	British	Association Nitrate Co.	390.0	52.0	24.0	Azores	Nitrate of soda	7 600	5 813	4 130
Western	8	8 00	8	10 46	8	22 00	8	22 00	American	Sun Oil Co.	480.6	66.0	28.4	Marcus Hook, Pa.	Gasoline	13 155	9 607	6 551
Sun	8	9 15	8	10 59	8	20 25	8	20 25	British	Pacific Steam Nav. Co.	210.1	41.7	16.0	Cristobal, C. Z.	Coffee hides	152	2 597	1 587
Chaparrero	8	11 00	8	14 22	8	22 00	8	22 00	Colombian	National Navigation Co.	116.0	21.1	8.0	Bocas del Toro, R. P.	75 mules	854	6 254	4 099
Caldas	8	12 30	8	16 03	8	22 45	9	2 30	American	Grace Line	370.0	53.2	18.0	New York, N. Y.	General	8 370	8 016	5 854
Santa Rita	8	13 10	8	19 46	9	12 30	9	15 50	Norwegian	Fred Olsen & Co.	435.9	56.2	28.0	Oslo, Norway	(*)	4 500	25 262	18 194
Ruete Nelson	8	15 10	9	6 18	9	14 30	9	15 10	American	Panama-Pacific Line	586.4	80.3	30.0	New York, N. Y.	General	9 368	8 299	5 979
Runaway	8	11 13	9	6 49	9	15 30	9	15 30	American	U. S. Government	237.5	42.1	17.0	Galveston, Tex.	Wheat, lumber	5 372	9 027	6 539
San Juan	9	4 30	9	7 32	9	18 30	9	18 30	Japanese	Taisho Kaun Co., Ltd.	445.0	58.0	30.0	Belfast, Ireland	General	3 568	8 015	5 849
Paul	9	5 40	9	7 51	9	17 00	9	17 00	American	Luckenbach Line	471.1	59.2	22.0	Boston, Mass	General	7 697	7 983	5 912
Luckenbach	9	19 40	9	9 51	9	19 15	9	21 00	Japanese	Nippon Yusen Kaisha	445.0	58.0	18.3	New York, N. Y.	General	7 286	7 611	5 450
Lieboon	9	19 40	9	9 51	9	19 15	9	21 00	Japanese	Nippon Yusen Kaisha	445.0	58.0	18.3	New York, N. Y.	General	7 286	7 611	5 450
Georgian	9	19 40	9	9 51	9	19 15	9	21 00	American	Amer-Hawaiian Line	434.5	57.7	24.0	Hamburg, Germany	Wheat	8 030	5 625	4 158
Steel Ranger	9	17 10	9	17 50	10	11 45	10	11 45	British	Isthmian S. S. Lines	424.2	56.2	26.0	Avonmouth, Eng.	Wheat	3 664	3 333	2 207
Burnhill	9	19 05	9	20 08	10	11 50	10	11 50	British	Milroy & Davis, Ltd.	405.0	53.5	25.0	St. Johns, N. F.	Lumber, general	85	238	163
Shannon	10	00 20	10	6 58	10	14 25	10	14 25	British	Cullford & Clark	390.0	53.5	25.0	Cristobal, C. Z.	Coffee, mach y	6 281	6 205	4 339
Lycia	10	00 25	10	7 27	10	14 40	10	14 40	Colombian	Canadian Transp. Co.	300.0	44.2	22.0	New York, N. Y.	Lumber	7 112	6 757	4 802
Cauca	9	23 55	10	7 41	10	16 42	10	16 42	American	National Navigation Co.	107.0	22.9	9.0	London, England	General	6 757	12 933	8 991
Manatany	9	19 22	10	8 48	10	16 30	10	16 30	American	Union Oil Co. of Calif.	390.0	54.2	25.0	New York, N. Y.	General	7 200	6 427	4 751
Yorkmar	10	6 40	10	9 05	10	16 50	10	16 50	American	Calmar S. S. Corp.	409.8	64.2	26.0	New York, N. Y.	General	4 151	8 313	5 901
Hertford	10	9 25	10	10 10	10	17 05	10	17 05	British	Strange & Co.	520.0	64.2	25.0	Pto. Cabello, Ven.	Ballast	3 569	10 637	7 617
Columbia	10	16 10	10	16 48	11	11 55	11	11 55	Danish	Federal Steam Nav. Co.	384.7	54.5	26.0	London, England	General	6 427	5 413	3 285
Delancey	9	21 55	10	18 40	11	12 10	11	12 10	American	Roosevelt S. S. Co., S.E.	456.1	56.0	21.0	Bahoa, C. Z.	General	3 569	10 637	7 617
Letetian	10	23 30	11	6 26	11	13 40	11	13 40	British	Trinidad Leasehold	364.0	61.1	19.0	London, England	General	6 427	5 413	3 285
Vainad	10	17 00	11	6 42	11	14 15	11	14 15	British	Shaw, Savill & Albion	477.8	61.1	23.3	Corral, Chile	General	6 427	5 413	3 285
Vainad	10	23 30	11	6 42	11	14 15	11	14 15	Norwegian	Den. Skand. Syd. P.	368.5	61.1	23.3	Bahoa, C. Z.	General	6 427	5 413	3 285
S-12	11	8 25	11	8 25	11	15 25	11	15 25	American	U. S. Navy	231.0	20.0		Cristobal, C. Z.	General	6 427	5 413	3 285

* Tanker.

14 Motor ship.

15 Coast Guard cutter.

16 Submarine.

17 For orders.

18 Kerosene and furnace oil.

19 Gasoline and fuel distillate.

20 Wheat, lumber, and general.

	9 57	10 51	11 18	10 10	11 20	25	American	Charles Nelson & Co.	324.0	42.6	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	4 110	3,984	2,628
Tashmoo	11	10 20	11 18	20	11 18	20	British	Reardon Smith Line	400.5	54.3	25.0	Vancouver, B. C.	Cardiff, Wales.	General.	7,530	7,003	5,406
Quebec City	11	10 50	11 11	57	11 20	30	American	Standard Oil Co., N.Y.	435.6	56.0	28.2	Los Angeles, Calif.	New York, N. Y.	(*)	10,106	7,356	5,117
City of																	
Panama	11	11 40	12 15	11	20 00	12	American	Panama Mail S. S. Co.	296.1	45.9	18.0	San Francisco, Cal.	Cristobal, C. Z.	General.	952	3,848	2,603
Guardian	25	2 30	11 14	24	11 21	35	12	All America Cables, Inc.	276.0	36.0	16.4	San Juan del Sur.	Cristobal, C. Z.	Submarine cable.	120	1,860	950
Charles R.																	
McCormick	11	13 40	11 14	36	11 22	00	American	Munson, McCor'k Line.	410.4	53.2	26.3	San Francisco, Cal.	New York, N. Y.	General, lumber.	6,467	7,082	5,167
Lena																	
Lukenbach	11	16 30	11 17	12	11 20	12	11	Lukenbach Line.	425.0	53.7	23.0	Portland, Ore.	Mobile, Ala.	(*)	4,428	7,217	5,295
Cissy	11	19 00	11 19	36	12 13	05	12	Companie "El Agulla"	289.5	44.2	20.0	Anacortes, Wash.	Tampico, Mexico.	Lumber, general.	2,502	2,937	2,080
Sir Karl																	
Knutson	11	18 15	12 6	29	12 18	00	12	Anglo-Saxon Pet. Co.	450.0	59.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	10,357	8,035	5,592
Panama	12	4 35	12 7	08	12 17	25	12	East Asiatic Co.	410.0	55.0	28.0	Seattle, Wash.	Copenhagen, Den.	Lumber, general.	8,526	7,027	5,341
Cal	12	5 10	12 7	12	18 45	14	10	Roland Line.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	960	1,105	698
Messico	12	2 30	12 9	30	12 19	13	14	Italian Nav. & Transp.	394.9	51.6	27.4	Tocopilla, Chile.	Azores	Nitrate.	8,324		
Solana	12	13 05	12 14	28	12 22	26	13	Tidewater Oil Co.	419.5	56.5	27.0	San Francisco, Cal.	New York, N. Y.	Gasoline, lub. oil	9,258	7,060	5,025
Mexican	12	17 15	12 17	50	13 9	05	13	Amer-Hawaiian Line.	472.3	57.2	27.5	Tacoma, Wash.	Boston, Mass.	General.	9,555	9,238	6,944
Hakushika																	
Maru	13	3 20	13 6	28	13 18	30	13	Tatsuma Kisen Kaisha.	445.0	58.0	28.0	Saigon, China.	La Guayra, Cuba.	Rice.	8,534	8,291	5,979
Oropesa	12	18 30	13 8	18	13 18	05	13	Pacific Steam Nav. Co.	552.0	66.0	28.0	Talcahuano, Chile.	Liverpool, England	(*)	8,204	14,827	10,630
Konigsberg	13	8 30	13 9	30	13 20	00	14	North German Lloyd.	431.5	56.3	27.0	Valparaiso, Chile.	Bremen, Germany	General.	8,041	7,253	5,012
San Lucas	13	10 00	13 10	44	13 19	35	13	States S. S. Co.	415.1	55.7	29.0	Vancouver, B. C.	London, England.	Lumber, general.	8,523	7,643	5,720
Pacific Oak	13	10 30	13 10	44	13 20	50	13	Dimon S. S. Corp.	409.7	54.5	24.0	Los Angeles, Calif.	Norfolk, Va.	Lumber, general.	6,814	6,687	4,974
El Aleto	13	14 15	13 15	00	13 22	10	13	Imperial Oil Co., Ltd.	440.8	57.0	27.3	Lobitos, Peru.	Halifax, N. S.	Crude petroleum	9,600	7,555	5,049
San Vincente	13	14 20	13 15	16	13 23	05	13	States S. S. Co.	410.5	54.3	26.0	Portland, Ore.	Philadelphia, Pa.	Lumber, general.	7,250	6,572	4,900
C. O.																	
Stillman	13	15 00	13 18	06	14 13	30	14	Inter. Petroleum Co.	565.7	75.6	33.3	Talara, Peru.	New York, N. Y.	Crude oil	21,103	16,780	9,883
Bitterfield	13	18 05	13 18	43	14 11	55	15	Hamburg-American Line	477.3	63.1	27.0	Vancouver, B. C.	Hamburg, Germany	General.	7,972	9,665	6,409

: Tanker.

: Light fuel distillate.

: Canned fruit and general.

: Copper, tin, ores, etc.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmidnight.

PORT OF CRISTOBAL

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
December 7	Tolon	United Fruit Co.	Port Limon, Costa Rica.	December 7	No. 688 ²³	Pan American Airways.	Miami via waypoints.
December 7	S. M. Spalding	Huasteca Petroleum Co.	Aruba, D. W. I.	December 7	No. 9685 ²³	Pan American Airways.	San Salvador and waypoints.
December 8	Estuero	John Rasmussen.	Bluefields, Nicaragua.	December 7	Tolon	United Fruit Co.	New York via Habana.
December 8	Peruero	French Line.	St. Nazaire and waypoints.	December 7	Ancon	Panama R. R. S. S. Line	New York via Haiti.
December 8	No. 9670 ²³	Pan American Airways.	San Salvador and waypoints.	December 9	S. M. Spalding	Huasteca Petroleum Co.	Aruba, D. W. I.
December 8	Coroiba C-40 ²³	Scandia Airplane Co.	Barraquilla and waypoints.	December 9	Francoula	Guad S. S. Line.	New York via waypoints.
December 8	Abangarez	United Fruit Co.	New York via Habana.	December 10	Peroula	French Line.	Hague via waypoints.
December 8	Guad S. S. Line.	New York via waypoints.	San Salvador and waypoints.	December 10	No. 9688 ²³	Pan American Airways.	San Salvador and waypoints.
December 9	Cryussen	Royal Netherlands S. S. Co.	Hamburg via waypoints.	December 10	Gryussen	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
December 9	Metapan	United Fruit Co.	New York via Kingstons.	December 10	Estuero ²⁴	John Rasmussen.	Bluefields, Nicaragua.
December 10	Irona	United Fruit Co.	New Orleans, La.	December 10	Abangarez.	United Fruit Co.	Port Limon, Costa Rica.

* Other than ships passing through the Canal.

: Motor schooner.

: Air mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.				
* ARRIVALS.					Date.	Vessel.	Line.	For—	
December 10...	No. 670 M ²⁶ ...	Pan American Airways...	Miami via waypts.	December 11...	Irioma...	United Fruit Co.	Port Limon, Costa Rica.		
December 10...	No. 9685 ²⁶ ...	Pan American Airways...	San Salvador and waypts.	December 11...	No. 300-N ²⁶ ...	Pan American-Craces Airways...	Talara via waypts.		
December 12...	Atlantida...	Standard Fruit & S. S. Co.	New Orleans via Habana.	December 11...	Waurita...	Standard Fruit & S. S. Co.	Puerto Cabezas, Nic.		
December 12...	Crynsen...	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	December 11...	No. 309-N ²⁶ ...	Pan American Airways...	La Guayra via waypts.		
December 12...	Anacucuna ²⁷ ...	United Fruit Co.	Colon, Rep. of Panama.	December 11...	Metapan...	United Fruit Co.	New York via waypts.		
December 13...	Irioma...	United Fruit Co.	Port Limon, Costa Rica.	December 12...	Anacucuna ²⁷ ...	United Fruit Co.	Colon, Rep. of Panama.		
December 13...	Abangarez...	United Fruit Co.	Tampico via waypts.	December 12...	No. 9670 ²⁶ ...	Pan American Airways...	San Salvador and waypts.		
December 13...	Galicia...	Hamburg-American Line	Port Limon, Costa Rica.	December 12...	Cordoba C-40 ²⁶ ...	Scandia Airplane Co.	Barranquilla & Cartagena.		
December 13...	Davisian...	Leyland S. S. Line...	La Guayra via waypts.	December 13...	Atlantida...	Standard Fruit & S. S. Co.	New Orleans and waypts.		
December 13...	No. 309-N ²⁶ ...	Pan American Airways...	San Salvador and waypts.	December 13...	Crynsen...	Royal Netherlands S. S. Co.	Amsterdam via waypts.		
December 13...	No. 668-M ²⁶ ...	Pan American Airways...	Miami via waypts.	December 13...	Irioma...	United Fruit Co.	New Orleans and waypts.		
December 13...	No. 9688 ²⁶ ...	Pan American Airways...	New York via waypts.	December 13...	Galicia...	Hamburg-American Line...	Cartagena, Colombia.		
December 13...	Martique...	Colombian S. S. Line...	Colon, Rep. of Panama.	December 13...	Abangarez...	United Fruit Co.	New York via Habana.		
December 13...	El Panquiao...	Panamaman Government...	Colon, Rep. of Panama.	December 13...	Inapaguina ²⁷ ...	A. Tagaropolos...	Colon, Rep. of Panama.		
December 13...	Inapaguina ²⁷ ...	A. Tagaropolos...	Colon, Rep. of Panama.	December 13...	El Panquiao...	Panamaman Government...	Colon, Rep. of Panama.		
* Air mail carrier. ²⁷ Motor boat.					PORT OF BALBOA.				
December 7...	Nora ²⁷ ...	Arrow Oil Co.	Los Angeles, Calif.	December 9...	Nora ²⁷ ...	Arrow Oil Co.	Los Angeles, Calif.		
December 12...	Real ²⁸ ...	Hans Elliot...	Panama Bay, R. P.	December 12...	Real ²⁸ ...	Hans Elliot...	Panama Bay, R. P.		
December 12...	Ligia Elena ²⁸ ...	A. Valdez...	Panama Bay, R. P.	December 12...	Ligia Elena ²⁸ ...	A. Valdez...	Panama Bay, R. P.		
December 12...	Liberator ²⁸ ...	A. Valdez...	Panama Bay, R. P.	December 12...	Liberator ²⁸ ...	A. Valdez...	Panama Bay, R. P.		
December 12...	Nueva Panama ²⁹ ...	Hans Elliot...	Panama Bay, R. P.	December 12...	Nueva Panama ²⁹ ...	Hans Elliot...	Panama Bay, R. P.		
December 12...	La Perla...	United Fruit Co.	San Francisco, Calif.	December 13...	La Perla...	United Fruit Co.	San Francisco, Calif.		
December 12...	Fortuna ²⁹ ...	Carlo Pagnamentos	Buenaventura, Colombia.						
December 12...	Condor...	Grace Line...	Valparaiso, Chile.						

* Other than ships passing through the Canal.

²⁸ Motor schooner.²⁹ Motor ship.²⁷ Tanker.

Commercial Traffic Through the Panama Canal in November, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of November, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for November, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	71	388,619	293,075	474,238	292,981	\$332,329.91	171,379
Europe to west coast Canada:							
British.....	14	77,585	56,031	89,867	55,811	59,384.05	6,316
Danish.....	1	5,303	4,223	6,637	4,223	5,278.75	3,776
Dutch.....	2	14,332	11,060	17,875	11,184	13,825.00	3,165
French.....	1	7,475	4,446	7,817	4,667	5,557.50	3,358
German.....	3	20,314	12,613	22,180	13,259	15,766.25	14,766
Italian.....	1	6,497	4,905	8,124	5,128	6,131.25	1,244
Norwegian.....	2	11,626	6,970	11,390	7,092	8,712.50	6,971
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	6,565
Total.....	25	148,469	103,109	169,100	105,111	118,231.55	46,161
East coast of United States to west coast of South America:							
British.....	3	9,400	8,068	13,119	8,117	7,370.69	666
Chilean.....	2	10,659	6,652	12,658	7,201	8,315.00	3,425
Danish.....	2	9,494	5,535	9,170	5,567	6,918.75	4,850
Norwegian.....	1	6,246	3,953	6,698	3,891	4,941.25	.....
Swedish.....	3	12,995	10,683	35,700	12,593	9,356.40	.....
United States.....	10	40,321	30,734	55,650	30,724	34,057.50	16,732
Total.....	21	89,115	65,625	132,995	68,093	70,959.59	25,673
East coast of United States to Far East:							
British.....	9	51,064	31,578	53,299	31,621	39,472.50	43,707
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	4,912
Japanese.....	4	19,467	16,813	25,020	17,028	21,016.25	23,027
Norwegian.....	1	4,538	2,477	4,116	2,454	3,096.25	3,100
United States.....	5	28,385	20,950	32,354	20,927	26,187.50	33,912
Total.....	20	108,954	74,899	119,827	75,185	93,623.75	108,658
Europe to west coast of South America:							
British.....	5	34,958	27,089	45,643	28,040	33,861.25	20,558
Chilean.....	1	203	185	361	174	231.25	102
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
Dutch.....	2	14,593	9,093	15,618	8,900	11,366.25	10,315
French.....	1	4,834	3,223	5,390	3,219	4,028.75	2,862
German.....	4	19,166	14,013	23,041	14,084	17,516.25	14,239
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	5,253
Yugoslav.....	1	3,288	2,355	3,718	2,273	2,943.75	4,877
Total.....	16	86,966	64,265	107,751	64,798	78,157.69	58,206
Europe to west coast of United States:							
British.....	8	41,785	30,364	49,167	30,305	33,308.74	8,622
German.....	2	10,844	8,272	14,028	8,139	8,759.45	265
Norwegian.....	3	16,305	14,006	23,173	13,920	11,829.60	.....
Swedish.....	1	3,708	2,565	4,257	2,862	3,206.25	5,000
United States.....	1	4,339	3,072	5,031	3,106	3,840.00	4,102
Total.....	15	76,981	58,279	95,656	58,332	60,944.04	17,989
Cristobal to west coast of South America:							
Colombian.....	5	737	718	1,113	716	869.30	930
Dutch.....	1	742	294	780	323	367.50	35
German.....	7	5,971	4,014	7,574	4,146	5,017.50	988
Total.....	13	7,450	5,026	9,467	5,185	6,254.30	1,953

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	52,724	39,390	63,621	39,912	\$49,219.42	31,939
French.....	1	5,629	4,343	7,007	4,402	5,428.75	3,694
Swedish.....	1	5,346	3,468	5,788	4,300	4,335.00	4,873
Total.....	9	63,699	47,201	76,416	48,614	58,983.17	40,506
Foreign vessels in ballast— United States inter- coastal:							
British.....	2	11,012	9,678	15,799	9,566	7,928.64	.....
Norwegian.....	3	15,386	11,780	19,668	11,601	11,077.92	.....
Total.....	5	26,398	21,458	35,467	21,167	19,006.56	.....
East coast of United States to Australasia:							
British.....	4	30,113	19,161	30,552	19,286	23,951.25	6,487
United States.....	1	5,247	3,825	6,197	3,822	4,781.25	4,742
Total.....	5	35,360	22,986	36,749	23,108	28,732.50	11,229
East coast of United States to west coast of Can- ada:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	.....
United States.....	3	16,297	12,169	19,519	12,150	15,211.25	20,982
Total.....	4	21,156	14,788	23,963	14,819	18,485.00	20,982
Cristobal to west coast of United States:							
United States.....	4	9,504	7,344	12,528	7,374	7,792.39	1,084
Cristobal to west coast of Central America:							
British.....	4	3,763	3,216	5,959	3,365	4,020.00	2,427
Around the World:							
United States.....	2	18,429	12,589	21,020	12,589	15,736.25	7,443
East coast of South America to west coast of Can- ada:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	3,625
United States.....	1	5,049	3,545	5,603	3,547	4,431.25	5,640
Total.....	2	10,357	6,439	10,476	6,531	8,048.75	9,265
Cristobal to Balboa:							
German.....	1	1,041	517	1,153	556	646.25	.....
Panamanian.....	1	20	15	20	16	14.40	.....
Total.....	2	1,061	532	1,173	572	660.65	.....
East coast of United States to Hawaii:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	1,857
East coast of United States to Philippine Islands:							
Panamanian.....	1	6,967	3,963	6,604	4,057	4,953.75	4,039
East coast of United States to Balboa:							
Norwegian.....	1	4,386	3,829	6,074	3,575	4,786.25	4,178
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	3,590
East coast of Canada to west coast of South Amer- ica:							
British.....	1	7,711	6,391	11,404	6,254	5,551.92	.....
East coast of Canada to Australasia:							
British.....	1	4,172	3,286	5,454	3,340	4,107.50	3,928
East coast of Canada to Far East:							
Norwegian.....	1	972	878	1,376	778	1,097.50	650
West Indies to west coast of United States:							
Dutch.....	1	4,108	3,454	5,535	3,289	4,317.50	7,329
West Indies to west coast of South America:							
Japanese.....	1	4,400	4,357	5,864	4,259	3,267.75	.....
West Indies to Australasia:							
British.....	* 1					* 2,865.00	.....

* Naval vessel of 5,730 displacement tons.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to west coast of Central America:							
German.....	1	3,054	1,870	3,214	1,886	\$2,337.50	1,929
East coast of Central America to west coast of South America:							
Norwegian.....	1	1,192	1,062	1,655	943	1,327.50	2,101
East coast of South America to west coast of United States:							
United States.....	1	4,967	3,670	5,785	3,664	4,587.50	1,542
Egypt to west coast of United States:							
Norwegian.....	1	4,723	2,728	4,624	2,765	3,400.56	.....
Grand total, November, 1930.	232	1,148,859	841,183	1,398,460	847,512	970,646.33	554,098
Grand total, November, 1929.	271	1,326,585	992,754	1,644,234	994,462	1,133,093.79	810,890
Grand total, November, 1928.	275	1,340,040	1,010,176	1,652,246	1,010,593	1,144,261.24	780,752

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	73	403,467	304,042	491,734	305,959	\$380,052.50	560,398
West coast of Canada to Europe:							
British.....	27	138,967	96,700	157,072	96,604	120,859.45	203,757
Danish.....	1	5,256	2,207	6,636	4,236	5,258.75	8,909
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	17,994
French.....	2	12,449	7,966	13,903	8,438	9,937.50	14,065
German.....	3	19,438	12,272	21,079	12,830	15,340.00	23,894
Italian.....	2	10,499	7,706	12,665	7,916	9,632.50	15,591
Norwegian.....	5	26,213	17,832	29,170	18,660	22,290.00	39,069
Swedish.....	2	11,018	6,836	11,112	8,471	8,545.00	14,151
United States.....	1	5,497	3,465	5,687	3,450	4,331.25	7,100
Total.....	45	244,774	167,732	274,789	171,437	209,649.45	344,530
West coast of South America to Europe:							
British.....	18	83,577	64,503	105,069	65,010	80,628.75	128,827
Danzig.....	1	6,310	5,346	8,940	5,050	6,682.50	11,324
Dutch.....	4	21,943	14,288	24,097	14,308	17,860.00	35,560
German.....	7	36,147	26,645	39,536	25,285	33,306.25	55,331
Greek.....	4	14,853	11,271	17,978	11,223	14,098.75	29,780
Italian.....	1	7,516	5,514	12,002	6,058	6,892.50	3,287
Spanish.....	2	5,188	4,477	6,910	4,230	5,596.25	10,500
Swedish.....	3	11,370	7,903	13,341	10,158	9,878.75	19,648
Yugoslav.....	1	4,188	3,310	5,150	3,281	4,137.50	7,660
Total.....	41	191,092	143,257	233,023	144,603	179,071.25	301,917
West coast of South America to east coast of United States:							
British.....	4	15,579	12,065	20,968	12,736	15,081.25	15,848
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	3,686
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	7,900
Swedish.....	1	4,421	3,743	15,339	4,377	4,678.75	22,144
United States.....	12	51,686	41,101	74,453	41,047	51,110.85	111,650
Total.....	19	80,927	63,051	122,542	64,868	78,548.35	161,228
West coast of United States to Europe:							
British.....	8	41,458	35,968	53,925	34,386	\$44,905.35	48,933
Danish.....	1	4,097	3,355	5,722	3,406	4,193.75	7,656
French.....	1	7,466	4,438	7,759	4,677	5,547.50	8,349
German.....	2	9,953	7,031	11,537	7,122	8,788.75	14,720
Japanese.....	2	7,812	5,966	9,684	5,509	7,457.50	13,430
Norwegian.....	2	10,584	8,951	14,943	8,924	11,188.75	19,976
United States.....	2	14,781	11,398	18,120	11,274	14,247.50	25,233
Total.....	18	96,151	77,107	121,690	75,298	96,329.10	138,297
West coast of South America to Cristobal:							
Colombian.....	5	881	856	1,285	858	900.20	499
Dutch.....	1	742	294	780	323	367.50	333
German.....	6	5,273	3,396	6,551	3,530	4,245.00	4,226
United States.....	1	2,606	1,350	2,434	1,349	1,637.50	523
Total.....	13	9,502	5,896	11,050	6,060	7,200.20	5,581

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Europe:							
British.....	8	64,503	44,453	75,277	46,531	\$55,566.25	42,609
French.....	1	5,364	4,287	7,139	4,335	5,358.75	2,910
Total.....	9	69,867	48,740	82,416	50,866	60,925.00	45,519
Philippine Islands to east coast of United States:							
Danish.....	1	2,510	1,938	3,252	1,985	2,422.50	4,462
Japanese.....	2	11,430	8,724	13,960	8,571	10,905.00	13,808
Norwegian.....	1	7,075	4,009	6,751	4,115	5,011.25	4,118
United States.....	2	12,928	9,861	15,359	9,637	12,326.25	10,291
Total.....	6	33,943	24,532	39,322	24,308	30,665.00	32,679
West coast of United States to West Indies:							
British.....	1	4,797	4,348	7,402	4,277	5,435.00	8,855
Danish.....	1	5,695	4,728	7,691	4,713	5,910.00	10,720
Norwegian.....	1	5,531	4,682	7,614	4,563	5,852.50	11,174
Total.....	3	16,023	13,758	22,707	13,553	17,197.50	30,749
West coast of Canada to east coast of United States:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,111
Norwegian.....	1	4,273	2,616	4,414	2,668	3,270.00	6,600
United States.....	1	4,870	3,408	5,521	3,398	4,260.00	7,564
Total.....	3	14,207	8,774	14,667	8,931	10,967.50	21,275
Hawaii to east coast of United States:	2	8,539	6,125	10,071	6,153	7,656.25	16,003
Australasia to east coast of United States:							
British.....	1	5,210	3,083	5,066	3,079	3,853.75	8,300
Norwegian.....	1	4,534	2,465	4,114	2,453	3,081.25	6,851
Total.....	2	9,744	5,548	9,180	5,532	6,935.00	15,151
Far East to east coast of United States:	2	13,049	10,389	16,964	10,240	12,986.25	4,842
Australasia to east coast of Canada:							
British.....	2	8,516	6,534	10,862	6,602	8,167.50	6,496
West coast of United States to Cristobal:	2	4,569	4,104	6,891	4,141	5,076.95	1,091
West coast of Central America to Cristobal:	2	2,322	1,930	3,662	2,061	2,412.50	486
Foreign vessels in ballast— United States inter- coastal:	1	242	210	592	213	174.24	.....
Panamanian.....	1	7,711	6,391	11,404	6,254	7,988.75	15,860
West coast of South America to east coast of Canada:	1	7,711	6,391	11,404	6,254	7,988.75	15,860
West coast of Central America to Europe:	1	3,272	2,565	4,165	2,547	2,355.84	.....
Balboa to Cristobal:	1	20	15	20	16	14.40	.....
Panamanian.....	1	4,691	2,670	4,359	2,638	3,337.50	7,000
Far East to Europe:	1	4,691	2,670	4,359	2,638	3,337.50	7,000
Grand total, November, 1930.	247	1,222,628	903,370	1,492,110	912,280	1,127,711.03	1,709,102
Grand total, November, 1929.	254	1,172,321	890,898	1,471,806	892,539	1,111,802.15	1,723,741
Grand total, November, 1928.	252	1,128,257	866,882	1,426,332	872,177	1,081,676.24	1,720,878

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pan canal, Panama;" in the United States, "Pan canal, Washington."

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., December 9, 1930.

No. 820.

Colombia, Atlantic coast, lights extinguished. The Master of the French S. S. *Perou* reports the following lights extinguished on December 7, 1930:

1. *Galera de Zamba Point light.* Approximate position: Latitude 10° 48' 25" N., longitude 75° 19' 45" W.

2. *Cartagena Harbor.* The light on the south side of the entrance to Cartagena Harbor and the buoy north of Castillo Grande Point were also extinguished.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending December 6, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Colombo.....	Italian S. S. Line.....		December 1.....		564
Darien.....	Leyland S. S. Line.....		December 2.....		77½
Ecuador.....	Panama Mail S. S. Co.....	December 1.....	December 3.....	290	674
Tolosa.....	United Fruit Co.....	December 1.....	December 3.....	409	18
Guayaquil.....	Panama R. R. S. S. Line.....	December 2.....	December 2.....	204	95
Pacific Exporter.....	Furness, Withy & Co.....	December 2.....	December 3.....	(*)	110
Acajutla.....	Pacific Steam Nav. Co.....	December 2.....	December 6.....	210	591
Eleanor Christenson.....	Arrow S. S. Line.....	December 3.....	December 3.....	116	(*)
Sanyo Maru.....	Osaka Shosen Kaisha.....	December 3.....	December 3.....	155	164
Tivives.....	United Fruit Co.....	December 3.....	December 4.....	221	561
Ancon.....	Panama R. S. S. Line.....	December 3.....	December 3.....	2,717	
Guatemala.....	Panama Mail S. S. Co.....	December 3.....	December 4.....	769	141
Tela.....	United Fruit Co.....	December 3.....	December 4.....	906	59
Alda.....	North German Lloyd.....	December 3.....	December 4.....	62	83
Nevada.....	French Line.....	December 3.....	December 4.....	18	100
Seattle.....	Hamburg-American Line.....	December 4.....	December 4.....	236	416
Mississippi.....	French Line.....	December 4.....	December 4.....	99	(*)
Davision.....	Leyland S. S. Line.....	December 4.....	December 5.....	367	(*)
Fidelo.....	Aluminium Line.....	December 4.....	December 5.....	1,165	71
Swiftsure.....	C. D. Mallory & Co.....	December 4.....	December 5.....	10,562	(*)
Oroya.....	Pacific Steam Navigation Co.....	December 4.....	December 5.....	63	290
Capra.....	Italian S. S. Line.....	December 4.....	December 6.....	346	29
Jefferson Myers.....	Pacific-Atlantic S. S. Co.....	December 5.....	December 5.....	155	(*)
Cefalu.....	Standard Fruit & S. S. Co.....	December 5.....	December 6.....	112	533
Cerigo.....	Hamburg-American Line.....	December 5.....	December 6.....	635	
Baralt.....	Royal Netherlands S. S. Co.....	December 5.....	December 6.....	626	
Bogota.....	Colombian S. S. Line.....	December 5.....	December 6.....	143	504½
Suriname.....	United Fruit Co.....	December 5.....	December 6.....	802	(*)
Santa Inez.....	Grace Line.....	December 5.....	December 6.....	107	786
Arana.....	Pacific Steam Navigation Co.....	December 6.....	December 6.....	261	183
Tela.....	United Fruit Co.....	December 6.....	December 6.....	387	143
Kreta.....	Hamburg-American Line.....	December 6.....	December 6.....	490	
Dora K.....	R. Feuillebois.....	December 6.....	December 6.....	(*)	13
Santa Barbara.....	Grace Line.....	December 6.....	December 6.....	3	

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending December 13, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Inez.....	Grace Line.....	December 6.....	December 6.....	(*)	
Santa Barbara.....	Grace Line.....	December 6.....	December 6.....	26	
Nora.....	Arrow Oil Co.....	December 7.....	December 8.....	13,400	
Kreta.....	Hamburg-American Line.....	December 7.....	December 7.....	177	
Lisbon Maru.....	Nippon Yusen Kaisha.....	December 8.....	December 9.....	102	
Santa Rita.....	Grace Line.....	December 8.....	December 8.....	5	1
Defiance.....	Roosevelt S. S. Co., S. B.....	December 9.....	December 10.....	306	
Barnevelt.....	Royal Netherlands S. S. Co.....	December 9.....	December 9.....	158	
Vinland.....	Scandinavian-South Pacific Line.....	December 10.....	December 11.....	127	
Santa Maria.....	Grace Line.....	December 11.....	December 11.....	21	18
U. S. S. Nitro.....	U. S. Navy.....	December 11.....	December 12.....	8	
Virginia.....	Panama-Pacific Line.....	December 12.....	December 12.....		182
Cauca.....	National Navigation Co.....	December 12.....	December 13.....	23	35

* 38 tons and 1 automobile.

Lines Add Extra Tonnage for Heavy Fruit Movement from Pacific Northwest.

Referring to item "Fruit Shipments from Pacific Northwest," published in THE PANAMA CANAL RECORD of December 3, 1930, the Hamburg-American Line advise that its company, in conjunction with the North German Lloyd, has scheduled six sailings in addition to their regular 10-day schedule between Europe and the west coast of North America, to take care of the heavy movement of fresh fruit. The additional vessels which will be placed in this service are the steamers *Bitterfield*, *Witram*, *Justin* and *Witell*, the two former making two sailings each. These vessels are expected to load to capacity, chiefly with boxes of apples.

The Donaldson Line, also operating in the Europe-North Pacific coast service, have also placed two extra carriers, the *Corrientes* and *Cortona*, in this service to meet the heavy demand for fresh fruit space.

Two extra carriers, the *Elstree Grange* and *Canonesa*, have been added by the Furness Line to its European-North Pacific coast service to participate in this traffic; while Shaw, Savill & Albion, Ltd., have routed the steamer *Maimoa* to this service for the carriage of fresh fruit.

Notaries Public in the Canal Zone.

The following is a list of notaries public commissioned in the Canal Zone as of December 10, 1930. The list gives, by towns, the names, where stationed, and the date of expiration of commission:

ANCON.

Boyd, Oscar S., Municipal Division, July 30, 1931.
French, A. W., Gorgas Hospital, May 14, 1932.
McDougall, J. B., District Attorney, March 29, 1932.
Norris, R. N., Municipal Division, August 11, 1933.
Sheibley, F. H., District Court, October 27, 1932.
Walker, James J., District Court, November 22, 1931.

BALBOA.

Hyde, W. H., Port Captain, March 6, 1933.
Illwitzer, P. G., Balboa Storehouse, October 12, 1932.
Kalar, J. D., Port Captain, April 13, 1932.
Kelley, Thomas H., Mechanical Division, August 18, 1933.
Lefever, John E., Fort Amador, February 28, 1931.
Prager, J. F., Balboa Storehouse, December 13, 1932.
Smith, Walter R., Balboa Storehouse, September 4, 1931.
Stillwell, J. L., Fort Amador, April 20, 1931.

BALBOA HEIGHTS.

Attaway, E. F., Administration Building, Room 316, October 28, 1933.
Boggs, W. B., Administration Building, Room 262, August 4, 1931.
Buehler, G. H., Administration Building, Room 205, August 17, 1931.
Fenton, John A., Administration Building, Room 203, July 28, 1933.
Schecker, C. A., Administration Building, Basement, January 19, 1933.
Sims, Walter H., Quarry Heights, December 1, 1933.
Taylor, R. G., Administration Building, Room 318, April 30, 1933.
Ungar, J., Administration Building, Room 301, February 2, 1932.
Wang, Frank H., Administration Building, Room 305, April 29, 1932.
Barnes, J. O., Administration Building, Room 264, October 17, 1932.
Uhler, H. L., Administration Building, Room 310, January 12, 1933.

COROZAL.

Daniels, W. L., Corozal, June 23, 1932.
Fisher, Miss Bernice S., Panama Ordnance Depot, May 2, 1932.
Grimm, G. L., Corozal Hospital, October 8, 1932.
West, Charles E., Albrook Field, July 23, 1933.

CRISTOBAL-MOUNT HOPE.

Agnew, Harold A., United Fruit Co., September 4, 1932.
Campbell, J. S., District Court, January 28, 1932.
Clarke, V. J., Commissary Division, January 14, 1932.
Ellis, Edward E., Coaling Plant, May 24, 1933.
Flood, Arthur, Customs Office, November 15, 1931.
Fuller, Mrs. Maude W., Coco Solo, December 9, 1933.
MacSparren, E. S., Receiving and Forwarding Agency, December 5, 1933.
Murray, P. E., Magistrate, October 13, 1932.
Raymond, J. G., Commissary Division, January 3, 1932.
Scarborough, W. W., Clubhouse, January 21, 1933.
Slocum, E. L., Chase National Bank, January 29, 1933.
Walsh, M. H., Customs Office, August 5, 1932.
Ward, Mrs. Marie L., Receiving and Forwarding Agency, August 2, 1932.
Gates, R. E., Commissary Division, June 12, 1932.

GATUN.

Malone, P. L., Railroad Station, November 23, 1931.
Cotton, Arthur E., Clubhouse (gold), May 16, 1933.

PARAISO.

Holzappel, A. F., Dredging Division, September 30, 1932.
Kimble, W. I., Dredging Division, July 25, 1932.

PEDRO MIGUEL.

Behlen, Ernest, Storehouse, January 23, 1932.
Cauthers, R. A., Municipal Division, June 16, 1933.
Rader, T. C., Pacific Locks, January 30, 1933.
Wright, A. M., Dredging Division, February 2, 1933.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 24, 1930. No. 21.

Holiday Greetings.

In the absence of Governor Burgess, it gives me great pleasure to extend to the personnel of The Panama Canal and the Panama Railroad Company, to the patrons and friends of the Canal, and to the people of the Republic of Panama sincere good wishes for a merry Christmas and a happy and prosperous New Year.

I take this opportunity of expressing the appreciation of the Panama Canal administration for the loyalty and cooperation of our employees and the good will of our patrons throughout the year now drawing to a close.

J. L. SCHLEY,
Acting Governor, The Panama Canal.
2d Vice President, Panama Railroad.

CANAL WORK IN NOVEMBER, 1930.

The following is the report of the Acting Governor to the Secretary of War, of Canal work in the month of November, 1930.

BALBOA HEIGHTS, C. Z., December 13, 1930.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of November, 1930:

NUMBER OF TRANSITS.

During the month 479 commercial vessels and 4 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 40 vessels belonging to the United States Government, 1 transit of a Panamanian Government vessel, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 527 transits for the month, or a daily average of 17.56.

Tolls on the commercial vessels amounted to \$2,098,357.36, and on the launches to \$20.22, a total of \$2,098,377.58, or a daily average on all traffic of \$69,945.92.

In comparison with October, 1930, traffic for the past month decreased 7.3 per cent in transits and 8.3 per cent in tolls collected. Practically all of the decline was in the traffic from the Atlantic to the Pacific. Pacific to Atlantic traffic was only slightly less than that for the previous month owing to the heavy seasonal movement of several large commodities, particularly food products, from the Pacific area. In comparison with November, 1929, traffic for the past month decreased 8.8 per cent in transits and 6.5 per cent in tolls. In comparison with the first 11 months of the calendar year 1929, the corresponding period this year shows a decrease of 518 transits and \$1,330,243.85 in tolls, or 8.8 per cent and 5.3 per cent, respectively.

The total numbers of craft of all kinds transiting the Canal during the month of November in 1930 and in the two preceding years are shown in the following tabulation:

	November, 1928.	November, 1929.	November, 1930.
Commercial vessels	527	525	479
Launches (under 20 tons)	5	4	4
Noncommercial vessels:			
United States Government	29	40	40
Panamanian Government vessels	2	2	1
Vessels for repairs	1	3	3
Total	564	574	527

In addition to the vessels listed above, Panama Canal floating equipment consisting of dredges, tugs, barges, launches, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun	8	9	17
Pedro Miguel	16	19	35
Miraflores	16	19	35
Total	40	47	87

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tolls, and tons of cargo carried by vessels transiting the Canal each month from the beginning of the calendar year to the end of November in 1929 and 1930:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March.....	536	515	2,567,961	2,505,559	2,743,768	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,483,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	488	2,468,280	2,433,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August.....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September...	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,457.36
Total.....	5,908	5,390	27,804,418	26,787,247	28,925,559	25,631,057	25,283,684.96	23,953,441.11

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these Governments, and vessels transiting solely for repairs, do not pay tolls. Shipping Board vessels in commercial service pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for November in the years 1928, 1929, and 1930, and comparison with the monthly averages for the fiscal year 1930:

	November, 1928.	November, 1929.	November, 1930.	Average per month for fiscal year 1930.
Number of vessels	527	525	479	515
Panama Canal net tonnage	2,468,297	2,498,906	2,371,487	2,498,385
United States net tonnage	1,877,058	1,883,652	1,744,553	1,890,255
Registered gross tonnage	3,078,578	3,116,040	2,890,570	3,119,221
Registered net tonnage	1,882,770	1,887,001	1,759,792	1,899,802
Tolls	\$2,225,937.48	\$2,244,895.94	\$2,098,357.36	\$2,256,407.50
Tons of cargo carried	2,501,630	2,534,631	2,263,200	2,502,519

The average daily number of transits, tonnage, tolls, and cargo are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1930.
	November, 1928.	November, 1929.	November, 1930.	
Number of transits	17.57	17.50	15.96	16.95
Panama Canal net tonnage	82,276	83,297	79,050	82,139
Tolls	\$74,197.91	\$74,829.86	\$69,945.25	\$74,183.26
Tons of cargo carried	83,387	84,488	75,440	82,275

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of November in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	November, 1928.	November, 1929.	November, 1930.
Panama Canal net tonnage.....	4,683	4,760	4,951
United States net tonnage.....	3,562	3,588	3,642
Registered gross tonnage.....	5,842	5,935	6,035
Registered net tonnage.....	3,573	3,594	3,674
Tolls.....	\$4,223.79	\$4,275.99	\$4,380.70
Tons of cargo (including vessels in ballast).....	4,747	4,828	4,725
Tons of cargo (laden vessels only).....	5,698	5,633	5,507

NATIONALITY OF VESSELS.

Seventeen nationalities were represented in the commercial traffic passing through the Canal in November, 1930. Vessels of United States registry, with 196, led in the number of transits, while those flying the British flag, with 133, were second. Vessels of these two nationalities made up over 68 per cent of the total transits for the month. Germany and Norway were next with 37 and 28, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of November, 1930, was 2,263,200 tons. Cargo from the Atlantic to the Pacific aggregated 554,098 tons, as compared with 649,853 tons in October, 1930, and 810,890 tons in November, 1929.

From the Atlantic to the Pacific various manufactured goods, totaling 166,172 tons, constituted the heaviest item of cargo, followed by mineral oils with 39,342 tons, cotton with 25,819 tons, cement with 24,885 tons, and phosphates with 21,451 tons. There was a decrease of 256,792 tons, or 31.7 per cent, in cargo in this direction as compared with November, 1929, owing to a general decline in the shipments of practically all of the important commodities usually routed in this direction.

From the Pacific to the Atlantic mineral oil shipments totaling 408,065 tons constituted the heaviest item, followed by nitrates with 226,197 tons, wheat with 221,309 tons, lumber with 195,273 tons, and ores (principally iron) with 137,429 tons. There was a decrease of 14,639 tons, or 0.85 per cent, in cargo in this direction as compared with November, 1929. Mineral oil shipments declined 77,518 tons, or 16 per cent; lumber, 71,721 tons, or 26.9 per cent; and ores, 46,238 tons, or 25.2 per cent. Nitrates and wheat increased, respectively, 14,643 tons, or 6.9 per cent, and 99,325 tons, or 81.4 per cent, in comparison with the corresponding month in the preceding year.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.720 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of November, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
British.....	* \$623,429.51	* \$674,127.80	\$50,698.29	
Chilean.....	12,837.50	15,534.00	2,696.50	
Colombian.....	1,769.50	1,493.20		\$274.30
Danish.....	40,657.50	47,518.00	6,860.50	
Danzig.....	11,093.94	9,986.20		1,107.74
Dutch.....	61,538.75	71,867.00	10,328.25	
French.....	35,878.75	43,217.00	7,338.25	
German.....	114,079.04	130,973.80	16,894.76	
Greek.....	14,038.75	14,853.00	764.25	
Italian.....	22,656.25	24,512.00	1,855.75	
Japanese.....	55,632.75	54,393.00		1,234.75
Norwegian.....	111,653.08	121,038.80	9,385.72	
Panamanian.....	5,156.79	7,130.20	1,979.41	
Spanish.....	5,596.25	5,188.00		408.25
Swedish.....	43,576.40	45,997.00	5,420.60	
United States.....	931,631.35	975,316.00	43,684.65	
Yugoslav.....	7,031.25	7,476.00	394.75	
Total.....	2,098,357.36	2,253,634.00	155,301.68	3,025.04
Net increase for all traffic.....			155,276.64	

* Includes \$2,865 collected for naval vessel at \$0.50 per displacement ton.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$28,607.19
United States foreign trade.....	15,728.60
United States—Canal Zone trade.....	* 651.14
Total.....	43,684.65

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in November, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
British.....	.53	1.29	.99
Chilean.....	.32	.79	.46
Colombian.....	1.26	.87	1.09
Danish.....	.67	1.72	1.27
Danzig.....		1.79	1.79
Dutch.....	.62	1.41	1.04
French.....	.55	1.00	.82
German.....	.59	1.39	1.04
Greek.....		2.00	2.00
Italian.....	.19	1.05	.82
Japanese.....	1.18	.99	1.06
Norwegian.....	.68	1.51	1.18
Panamanian.....	.58		.58
Spanish.....		2.02	2.02
Swedish.....	1.14	2.09	1.76
United States.....	.71	1.45	1.13
Yugoslav.....	1.48	1.83	1.68
Averages, November, 1930.....	.65	1.40	1.09
Averages, November, 1929.....	.84	1.49	1.20
Averages, November, 1928.....	.85	1.53	1.22

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of November is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	28,605	\$27,374.60	43	238,501	\$238,306.60
Ballast.....	34	190,199	137,013.42			
General cargo ships:						
Laden.....	165	822,268	725,831.80	199	980,228	886,590.25
Ballast.....	24	107,591	77,485.19	3	3,637	2,625.54
Noncargo-carrying ships:						
Naval.....	1		2,865.00			
Yachts.....	2	105	76.32	2	262	188.64
Total.....	232	1,148,859	970,646.33	247	1,222,628	1,127,711.03
Method of propulsion:						
Steam.....	165	811,092	709,434.14	189	937,362	868,554.89
Motor.....	66	337,681	261,150.27	58	285,266	259,156.14
Motor schooner.....	1	86	61.92			
Total.....	232	1,148,859	970,646.33	247	1,222,628	1,127,711.03

Of the 354 steam-driven vessels, 242 were oil burning, 104 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of November, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cruisers.....	1	2 8,900	\$4,450.00	1	2 8,150	\$4,075.00
Destroyers.....				4	2 4,616	2,308.00
Gunboats.....	1	2 1,575	787.50	1	2 1,575	787.50
Minesweepers.....	3	2 2,850	1,425.00	2	2 1,900	950.00
Submarines.....	8	2 6,898	3,449.00	5	2 4,380	2,190.00
Submarine tenders.....	1	2 2,360	2,950.00			
Supply ships.....	1	2 3,434	4,292.50			
Tankers.....	2	2 11,693	8,418.96	1	2 5,063	6,328.75
Transports.....	1	2 3,908	4,885.00			
Tugs.....	1	2 1,000	500.00	1	2 1,000	500.00
U. S. Army vessels:						
Mineplanters.....	1	2 1,208	604.00			
Transports.....	2	2 7,343	9,178.75	2	2 7,816	9,770.00
Treasury Department vessels:						
Coast Guard cutter.....				1	2 1,572	786.00
Total, U. S. Government.....	22		40,940.71	18		27,695.25
Panamanian Government vessels:						
Yachts.....				1	2 20	15.00
Vessels for repairs:						
Tankers.....	2	2 4,611	3,458.25	1	2 1,636	1,227.00
Grand total.....	24		44,398.96	20		28,937.25

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of November, 1930, carried cargo as follows: Atlantic to Pacific, 4,051 tons; Pacific to Atlantic, 3,149 tons; total, 7,200 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of November, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	2	19	\$15.15
Pacific to Atlantic.....	2	7	5.07
Total.....	4	26	20.22

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of November, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving.....tons..	44,426	20,766	65,192
Local cargo shipped.....tons..	7,446	1,398	8,844
Transit cargo arriving.....tons..	2,251,064	2,223,064	4,474,128
Transit cargo clearing.....tons..	2,248,873	2,257,019	4,505,891
Cargo received for transshipment.....tons..	21,163	2,638	23,801
Cargo transhipped.....tons..	22,156	1,632	23,788
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	115	38	153
Number of releases issued.....	621	211	832
Tons received.....	2,204	728	2,932
Tons withdrawn.....	1,971	668	2,639
Packages received.....	5,782	4,819	10,601
Packages withdrawn.....	6,393	3,843	10,236
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	40	3	43
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company.....tons..	12,150	464	12,614
Coal issued, miscellaneous:			
Panama Canal departments.....tons..	126	9	135
U. S. Army, including vessels.....tons..		2	2
Individuals and companies.....tons..	111		111
Panama Railroad Company.....tons..	8		8
Transferred to Navy.....tons..	475		475
Total sales and issues.....tons..	12,870	475	13,345
Coal on hand, November 1, 1930.....tons..	68,081		68,081
Coal on hand, December 1, 1930.....tons..	55,211		55,211
Coal received from Navy.....tons..		475	475
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....bbls..	7,408.30	13,549.27	20,957.57
Panama Railroad Company.....bbls..	868.43	471.36	1,339.79
U. S. Army and Navy.....bbls..		600.47	600.47
U. S. Department of Commerce.....bbls..	680.80		680.80
Individuals and companies.....bbls..		365.62	365.62
Total sales and issues.....bbls..	8,957.53	14,986.72	23,944.25
Fuel oil on hand, December 1, 1930.....bbls..	39,456.33	45,399.86	84,856.19
Diesel oil sold during November, 1930.....bbls..		1,682.89	1,682.89
Diesel oil on hand, December 1, 1930.....bbls..	1,083.28	9,152.41	10,235.69
Miscellaneous transfers.....bbls..		598.64	598.64
Gasoline and kerosene pumped for the Panama Canal.....bbls..	7,726.91	11,286.19	19,013.10
Gasoline pumped for individuals and companies.....bbls..	9,473.19	42,464.95	51,938.14
Oil pumped for individuals and companies:			
Receipts.....bbls..	197,354.94	55,257.00	252,611.94
Issues.....bbls..	209,042.22	209,601.72	418,643.94
Oil pumped for U. S. Navy.....bbls..	20,050.00	35,875.40	55,925.40
Total fuel oil, gasoline and kerosene handled.....bbls..	452,604.79	371,753.51	824,358.30
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	16	8	24
Measured for Panama Canal net tonnage.....	1	2	3
Remeasured for Panama Canal net tonnage.....	14	4	18
Panama Canal net tonnage corrected.....tons..	3	1	4
U. S. equivalent tonnage corrected.....tons..	3	8	11
Services of harbor equipment:			
Tugs, total operating hours.....	419 ³ / ₄	312 ³ / ₄	732 ¹ / ₂
Launches, total operating hours.....	1,316 ² / ₃	1,444 ¹ / ₃	2,761
Revenue from tug service, pilotages, etc.:			
Tug revenue.....	\$14,117.50	\$9,983.75	\$24,101.25
Pilotage.....	13,644.00	8,963.00	22,607.00
Seamen.....	10,448.00	11,448.00	22,096.00
Launch service.....	2,023.50	2,843.00	4,866.50
Wharfage.....	14,346.20	6,403.28	20,749.48
Ships measured.....	50.00	50.00	100.00
Miscellaneous.....	378.95	320.00	698.95

	Cristobal.	Balboa.	Total.
Ships repaired at Panama Canal shops:			
Commercial.....	60	11	71
U. S. Army and Navy.....	6	6	12
Panama Canal equipment.....	9	10	19
Total.....	75	27	102
Vessels dry-docked:			
Commercial.....	5	4	9
U. S. Army and Navy.....	2	2	4
Panama Canal equipment.....	2	1	3
Total.....	9	7	16
Clearances issued.....	316	237	553
Bills of health issued.....	265	246	511

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	536	3,279,104	1,994,127	508	3,027,575	1,846,077
Vessels entering port but not transiting Canal.	69	361,667	216,383	8	33,741	19,337
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	125	804,317	485,244	102	666,762	398,933
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	546	3,321,992	2,020,762	515	3,062,565	1,869,163
Vessels clearing port but not transiting Canal.	72	388,499	232,976	9	41,755	25,407
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	131	812,453	490,672	104	679,800	406,295

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,085	661	1,746	99	95	194
From Pacific ports.....	132	136	268	234	272	506
Total disembarking.....	1,217	797	2,014	333	367	700
Embarking:						
For Atlantic ports.....	815	985	1,800	39	88	127
For Pacific ports.....	201	136	337	263	315	578
Total embarking.....	1,016	1,121	2,137	302	403	705
Remaining on board:						
From Atlantic to Pacific ports.....	1,732	2,805	4,537	1,939	3,160	5,099
From Pacific to Atlantic ports.....	784	862	1,646	976	1,061	2,037
From Atlantic to Atlantic ports.....	442	118	560	.....	.....	.....
From Pacific to Pacific ports.....	.....	.....	.....	26	156	182
Total remaining on board.....	2,958	3,785	6,743	2,941	4,377	7,318
Total arriving.....	4,175	4,582	8,757	3,274	4,744	8,018
Total departing.....	3,974	4,006	8,880	3,243	4,780	8,023

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	232	57	24.6
Pacific to Atlantic.....	247	62	25.1
Total.....	479	119	24.8

In addition to the aforesaid, 54 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 177 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of November, 1930, 44 commercial airplanes entered and 41 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of November, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,950.08	\$10,659.11	\$23,884.34	\$256.00	\$6,855.40	\$43,604.93
Government vessels.....	356.42	1,355.42	8,019.98	74.21	1,392.90	11,198.93
P. R. R. vessels.....	2.40	132.30	957.40	789.40	177.05	2,058.55
Totalsales, November, 1930.	2,308.90	12,146.83	32,861.72	1,119.61	8,425.35	56,862.41
Totalsales, November, 1929.	2,803.65	15,164.58	37,146.00	975.01	7,775.32	63,864.56
Totalsales, November, 1928.	3,067.30	15,932.62	45,069.98	1,332.17	8,134.37	73,586.44
Sales at Balboa to:						
Commercial vessels.....	477.70	3,534.72	13,220.79	582.96	10,366.24	28,182.41
Government vessels.....	215.30	1,288.89	10,113.17	390.58	3,013.57	15,021.51
P. R. R. vessels.....				11.84		11.84
Totalsales, November, 1930.	693.00	4,823.61	23,333.96	985.38	13,379.81	43,215.76
Totalsales, November, 1929.	1,471.24	12,520.94	32,609.05	692.58	6,553.89	53,847.70
Totalsales, November, 1928.	1,537.63	11,644.95	19,267.52	720.79	13,717.25	46,938.14

The aggregate sales to Government vessels during the month was \$26,220.44; to Panama Railroad vessels, \$2,070.39; and to other commercial vessels, \$71,787.34, making the total sales to all vessels, \$100,078.71.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of November, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commeercial.			Nonecommercial. *					
	North.	South.	Total.	North.	South.	Total.	Nov., 1928.	Nov., 1929.	Nov., 1930.
Gatun.....	240	217	457	10	14	24	517	516	481
Pedro Miguel.....	242	219	461	13	24	37	545	541	498
Miraflores.....	243	218	461	13	23	36	544	539	497
Number of vessels put through locks.									
Gatun.....	249	231	480	30	36	66	576	623	546
Pedro Miguel.....	246	229	475	41	51	92	627	617	567
Miraflores.....	246	229	475	41	52	93	629	619	568

* Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	41	48	48
Panama Canal equipment.....	17	35	35
Launches (under 20 tons).....	5	4	5
Panamanian Government vessels.....		2	2
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in November, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,016,500,000	1,665,150,000	1,513,080,000
Maintenance.....	16,280,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, November, 1930.....	2,072,780,000	1,685,150,000	1,533,080,000
Total, October, 1930.....	2,242,780,000	1,805,920,000	1,598,640,000
Total, November, 1929.....	2,210,660,000	1,782,170,000	1,648,410,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of November, 1930, are shown in comparative form in the following tabulation:

	November.		November—Years of record.		
	1930.	1929.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	3,500	3,629	11,300	2,267	4,515
Maximum momentary discharge for the month.....	33,540	20,780	78,900		
Gatun Lake watershed, total yield.....	8,987	11,186	24,458	8,673	13,154
Gatun Lake watershed, net yield.....	8,386	10,624	23,950	7,995	12,638
Draft on Gatun Lake for lockages and power.....	¹ 2,941	3,022	3,022	² 1,066	² 2,367

¹ November 19, 1909.

² 1914 excluded.

³ Full power load.

The monthly mean discharge of the Chagres River at Alhajuela for November, 1930, was 3,500 c. f. s., which is 22 per cent below the 29-year average of 4,515 c. f. s. The maximum monthly mean discharge on record for November is 11,300 c. f. s. in 1909, and the minimum is 2,267 c. f. s. in 1905. Two rises of five feet or more at Alhajuela occurred during the month. The maximum momentary discharge for the month was 33,540 c. f. s. on the 29th, and the minimum was 1,478 c. f. s. at elevation 92.69 feet on the 25th. The maximum momentary discharge on record for November is 78,900 c. f. s. at elevation 111.40 on November 19, 1909, and the minimum is 1,356 c. f. s. at elevation 92.26 feet on November 30, 1918.

Gatun Lake varied in elevation during November from a minimum of 86.46 feet on the first, to a maximum of 87.16 feet on the 20th, averaging 86.91 feet. The elevation at midnight on October 31st was 86.50 feet and at midnight on November 30th, 86.84 feet, showing a net rise during the month of thirty-four hundredths of a foot. The total yield of Gatun Lake watershed was 8,987 c. f. s., which is 32 per cent below the 17-year November average of 13,154 c. f. s., and the second lowest during the 17-year period. The maximum total yield for November is 24,488 c. f. s. in 1917. Miraflores Lake varied between elevations 54.54 feet on the 16th and 52.89 feet on the 29th. The mean elevation for the month was 53.81 feet and at midnight on the 30th it was 53.74 feet.

SEISMOLOGY.

One seismic disturbance was recorded during the month, on the 21st.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month of November, 1930, was 5,207,100 kilowatt hours, and the computed water consumption was 3,925,621,835 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 9,800 kilowatt hours, and the fuel oil consumption was 32.74 barrels. This station was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 41 vessels during the month. There were 406 work orders issued during the month, as compared with 494 issued during the previous month.

MECHANICAL DIVISION.

During the month of November, 1930, miscellaneous repairs were made on 75 vessels at Cristobal and 27 at Balboa. Nine vessels were dry-docked at Cristobal and 7 at Balboa. Work was completed on the U. S. S. *Salinas*, which was at Balboa

docks for repairs to boilers and other minor repairs. Work on the United States Navy's submarine *S-16* was completed during the month, and the repairs on the submarine *S-17* were carried forward. The general overhaul of the tug *Sciota* was completed during the month.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary near Arraijan, 1,820 cubic yards were excavated and one double 24-inch culvert was placed. Due to wet weather, work on this project was reduced to a minimum in October last.

Miscellaneous municipal engineering work around the Naval Air Station, Coco Solo, consisting of excavating, grading, pipe laying, curbing, etc., was performed during November.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 730,015,575 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued during the month with an average advance of 2.2 feet toward the Canal between stations 1770-00 and 1777-00 W. The reference points on this slide also showed a slight movement. A dredge worked for 8 days on this slide between stations 1779-00 and 1795-00 W., excavating 31,900 cubic yards. Slight surface movements occurred on South Cucaracha and Cucaracha Signal Station slides during the month. A few new bank breaks also occurred during the month throughout the Cut. There was no interference to shipping on account of slides during the month.

The total excavation during November, 1930, was 686,875 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Canal prism, Gaillard Cut—			
South Cucaracha slide.....	4,300	10,000	14,300
Cucaracha Signal Station slide.....	2,400	14,000	16,400
West Culebra slide.....	7,200	24,700	31,900
Project No. 3.....	1,000	20,900	21,900
Canal prism, Pacific entrance—			
Project No. 1.....		35,550	35,550
Maintenance.....	5,000	1,500	6,500
Balboa inner harbor—			
Project No. 1, extension No. 1.....	12,500	18,800	31,300
Maintenance.....	425,000		425,000
Plant excavation:			
Colon fill.....	102,000		102,000
Dredging sand at Chame.....	2,025		2,025
Total.....	561,425	125,450	686,875

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and twenty single trips were made, and 114 Panama Canal, 51 U. S. Army, and 4,960 other vehicles, a total of 5,125, ferried across the Canal.

MADDEN DAM PROJECT.

The geological investigations were carried on intensively. Two hundred and seventy-five linear feet of drilling with diamond and shot drills were completed during the month. Compression tests were made at Miraflores laboratory of specimen cores from shot drill hole N-10 and from Haystellite bit holes T-5 and T-6 (weathering test). The report of test of specimen cores from shot drill holes N-3 and N-4 by the Materials Testing Laboratory, University of Illinois, the second series of three dimensional compression tests, was received on November 1st. Apparatus for test of compressive strength of rock in place was assembled and test was under way at the end of month. Observations of water table in drill holes were made weekly by the Section of Surveys and piezometric elevations were tabulated and plotted. Samples of Chagres River water were taken daily and forwarded to Miraflores laboratory from which two reports were received. A report on the results of earth dam investigations was submitted. The report covered purpose and procedure of investigations, available clay material, available rock material, saddles, and the weak slopes of the Azote-Caballo Ridge.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on November 30, 1930, was 23,907, composed of 8,071 Americans, 2,892 of whom were men, 2,456 women, and 2,723 children; 189 Europeans, 86 of whom were men, 30 women, and 73 children; and 15,647 West Indians, 4,262 of whom were men, 2,818 women, and 8,567 children. The total number of persons in quarters on November 30, 1929, was 22,138.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of November 19, 1930, with a comparison of the working force for the preceding month and for November, 1929:

	Total employees.		As of November 19, 1930.		
	November, 1929.	October, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	160	118	54	63	117
Electrical.....	324	368	167	199	366
Municipal Engineering.....	862	870	100	872	972
Lock operation.....	953	959	249	740	989
Dredging.....	1,275	1,194	200	981	1,181
Madden Project.....	648	206	25	167	192
Mechanical.....	1,443	1,429	510	916	1,426
Marine.....	835	804	199	578	777
Fortifications.....	288	359	21	144	165
Total.....	6,788	6,307	1,525	4,600	6,185
Supply Department:					
Quartermaster.....	2,562	1,770	201	1,529	1,730
Commissary.....	1,561	1,587	234	1,345	1,579
Cattle Industry—Plantations.....	123	97	2	97	99
Hotel Tivoli.....	112	114	8	110	118
Hotel Washington.....	110	108	8	99	107
Transportation.....	316	325	77	247	324
Total.....	4,784	4,001	530	3,427	3,957
Accounting Department.....	210	209	203	6	209
Health Department.....	1,151	1,097	283	825	1,108
Executive Department.....	857	883	547	336	883
Total.....	2,218	2,189	1,033	1,167	2,200
Panama Railroad Company:					
Superintendent.....	337	305	48	241	289
Transportation.....	189	190	66	127	193
Receiving and Forwarding Agency.....	1,332	1,116	79	1,143	1,222
Coaling Stations.....	265	231	43	165	208
Total.....	2,123	1,842	236	1,676	1,912
Grand total, November, 1929.....	15,913				
Grand total, October, 1930.....		14,339			
Grand total, November, 1930.....			3,324	10,930	14,254

Additions to the gold force on the Isthmus in November were as follows: Employed in the United States, 4; employed on the Isthmus, 7; reemployed on the Isthmus, 6; total, 17. Separations from the gold force totaled 25, as follows: Resigned, 9; discharged, 10; retired, 3; died, 3. At the end of the month there were on file 650 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 158 deaths occurred during the month of November, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.20 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 29; pneumonia (broncho and lobar), 19; diarrhea and enteritis, 16; and nephritis (acute and chronic) 16. There were 8 deaths from syphilis, 8 from organic diseases of the heart, 4 from cancer, and 1 each from measles and leprosy. There were 26 deaths among non-residents; these are not included in the above statistics.

There were 398 live births and 19 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 34.84. Deaths among children under 1 year of age numbered 45, giving an infant mortality rate, based on the number of live births reported, of 113.07.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 116, of whom 16 were employees (2 white and 14 colored), 12 were members of employees' families (2 white and 10 colored), 9 were Canal Zone agriculturists, 60 were other civilian nonemployees, and 19 were Army and Navy personnel. Of the 28 employees and members of employees' families, 19 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There were no deaths from malaria among residents.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$307,454.62, of which \$295,271.02 was for the Department of Operation and Maintenance, and \$12,183.60 for other Panama Canal departments.

FINANCIAL STATEMENT.

The following statement shows in condensed form the aggregate revenue and expenditures for the month of October, 1930, as compared with October, 1929, together with aggregate figures for the first 4 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of November at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	October, 1929.	October, 1930.	To end of October.	
			Last year.	This year.
Tolls.....	\$2,435,936.86	\$2,288,973.08	\$9,274,829.03	\$8,605,886.77
Other receipts.....	363,425.51	314,103.39	1,416,507.36	1,299,106.12
Total transit revenues.....	2,849,362.37	2,603,076.47	10,691,336.39	9,904,992.89
Total transit expenses.....	1,129,892.81	1,154,729.17	4,412,137.49	4,448,778.06
Net transit revenues.....	1,719,469.56	1,448,347.30	6,279,198.90	5,456,214.83
Three per cent capital charge.....	621,631.72	626,169.05	2,482,347.03	2,503,220.81
Transit surplus.....	1,097,837.84	822,178.25	3,796,851.87	2,952,994.02
Business revenues.....	1,506,447.00	1,297,735.92	6,317,794.26	6,266,835.90
Business expenses.....	1,437,121.11	1,236,691.10	5,975,112.00	5,995,423.79
Net business revenues.....	69,325.89	61,061.82	342,682.26	271,412.11
Three per cent capital charge.....	62,357.19	64,855.45	260,944.70	272,957.95
Business surplus.....	6,968.70	(3,793.63)	81,737.56	(1,545.84)
Combined revenues.....	4,355,809.37	3,900,832.39	17,009,130.65	16,171,828.79
Combined expenses.....	2,567,013.92	2,391,423.27	10,387,249.49	10,444,201.85
Net revenues.....	1,788,795.45	1,509,409.12	6,621,881.16	5,727,626.94
Three per cent capital charge.....	633,938.91	691,024.50	2,743,291.73	2,776,178.76
Combined surplus.....	1,104,806.54	818,384.62	3,878,589.43	2,951,448.18

() Denotes deficit.

Respectfully,

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending December 20, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....		December 7.....		616
Cerigo.....	Hamburg-American Line.....		December 7.....		430
Baralt.....	Royal Netherlands S. S. Co.....		December 7.....		70
Kreta.....	Hamburg-American Line.....		December 7.....		115

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Barbara.	Grace Line.	December 7.	December 7.		251
Tolosa.	United Fruit Co.	December 7.	December 7.	40	317 ¹ / ₂
Baarn.	Royal Netherlands S. S. Co.	December 7.	December 7.	52	177
Wisconsin.	French Line.	December 7.	December 8.	270	187
S. M. Spalding.	Pan-American Petroleum Co.	December 7.	December 9.	10,426	(²)
Lochmonar.	Royal Mail S. P. Co.	December 8.	December 8.	42	67
Barneveld.	Royal Netherlands S. S. Co.	December 8.	December 9.	93	583
Donau.	North German Lloyd.	December 8.	December 9.	87	344
Rhein.	Hamburg-American Line.	December 8.	December 9.	(¹)	106
Esfueño.	Colon Import & Export Co.	December 8.	December 9.	(¹)	49
Santa Rita.	Grace Line.	December 8.	December 9.	163	3 ¹ / ₂
Perou.	French Line.	December 8.	December 10.	34	397
Champerico.	Pacific Steam Navigation Co.	December 8.	December 13.	152	334 ¹ / ₂
Knut Nelson.	Fred Olsen & Co.	December 9.	December 9.	(¹)	35
Lisbon Maru.	Nippon Yusen Kaisha.	December 9.	December 9.	102	(²)
Abangarez.	United Fruit Co.	December 9.	December 10.	542	7
Crijnsen.	Royal Netherlands S. S. Co.	December 9.	December 10.	57	388
Iriona.	United Fruit Co.	December 10.	December 10.	1,251	(²)
San Antonio.	French Line.	December 10.	December 11.	31	46
Metapan.	United Fruit Co.	December 10.	December 11.	554	390
Cauca.	National Navigation Co.	December 10.	December 12.	35	279
DeLance.	Roosevelt S. S. Co.	December 11.	December 11.	254	(¹)
Santa Maria.	Grace Line.	December 11.	December 11.	169	116
City of Panama.	Panama Mail S. S. Co.	December 11.	December 12.	859	123
Drechtijk.	Holland-America Line.	December 11.	December 12.	123	211
Crijnsen.	Royal Netherlands S. S. Co.	December 12.	December 13.	(¹)	577
Saint Louis.	French Line.	December 12.	December 13.	538	13
Atlantida.	Standard Fruit & S. S. Co.	December 12.	December 13.	37	349
Calí.	Roland Line.	December 12.	December 13.	961	
Caldas.	National Navigation Co.	December 12.	December 13.	(¹)	51
Asia.	Danish-East Asiatic Co.	December 12.	December 13.	76	(¹)
Adolf von Baeyer.	Hamburg-American Line.	December 12.	December 13.	66	25
Nosa King.	N. O. & S. A. S. S. Co.	December 13.	December 13.	277	
Martinique.	Colombian S. S. Line.	December 13.	December 13.	25 ¹ / ₂	401
San Clemente.	States S. S. Co.	December 13.	December 13.	24	
Abangarez.	United Fruit Co.	December 13.	December 13.	34	442
Iriona.	United Fruit Co.	December 13.	December 13.	(¹)	419
Galicia.	Hamburg-American Line.	December 13.	December 13.	(²)	168
Oropes.	Pacific Steam Navigation Co.	December 13.	December 13.	65	
Davisan.	Leyland S. S. Line.	December 13.	December 13.	(¹)	99
Koenigsberg.	North German Lloyd.	December 13.	December 13.	2	(¹)
Calí.	Roland Line.	December 13.	December 14.		168 ¹ / ₂
Nosa King.	N. O. & S. A. S. S. Co.	December 13.	December 14.		205
San Clemente.	States S. S. Co.	December 13.	December 14.		19
Losada.	Pacific Steam Navigation Co.	December 14.	December 14.	22	22
Feltre.	Nav. Libera-Tristina.	December 14.	December 15.	136	(¹)
Georgie.	French Line.	December 14.	December 15.	32	455
Bitterfeld.	Hamburg-American Line.	December 14.	December 15.	6	437
Venezuela.	Panama Mail S. S. Co.	December 15.	December 16.	69	581
Tosca.	Knut Knutsen Line.	December 15.	December 16.	1	(¹)
Ulva.	United Fruit Co.	December 15.	December 17.	587	18
Pacific Pioneer.	Furness, Withy & Co.	December 15.	December 17.	(¹)	119
Alvarado.	Pacific Steam Navigation Co.	December 16.	December 16.	150	46
Amerika.	Danish-East Asiatic Line.	December 16.	December 16.	6	(¹)
Wiegand.	North German Lloyd.	December 16.	December 16.	32	38
Schwaben.	North German Lloyd.	December 16.	December 17.	49	239
Camden.	United Fruit Co.	December 16.	December 17.	5,667	(¹)
Tela.	United Fruit Co.	December 17.	December 17.	1,169	53
Wyoming.	French Line.	December 17.	December 17.	64	(¹)
Orcoma.	Pacific Steam Navigation Co.	December 17.	December 18.	81	224
Parthenia.	Donaldson Line.	December 17.	December 18.	(¹)	261
Illinois.	French Line.	December 17.	December 18.	220	(¹)
Durazzo.	Hamburg-American Line.	December 17.	December 17.	327	
Cristobal.	Panama R. R. S. S. Line.	December 17.	December 17.	2,984	
Sixola.	United Fruit Co.	December 17.	December 18.	344	442
Teno.	Chilean Line.	December 18.	December 18.	(¹)	8
Benjamin Franklin.	Fred Olsen & Co.	December 18.	December 18.	148	(¹)
Grünwald.	Hamburg-American Line.	December 18.	December 18.	73	16
Manizales.	North German Lloyd.	December 18.	December 19.	386	203
Kinderdijk.	Holland-America Line.	December 18.	December 19.	243	223
Convallaria.	Aluminium Line.	December 18.	December 19.	697	222
El Salvador.	Panama Mail S. S. Co.	December 18.	December 19.	960	178
San Jose.	United Fruit Co.	December 19.	December 19.	949	(¹)
Bodegraven.	Royal Netherlands S. S. Co.	December 19.	December 19.	108	322
Santa Teresa.	Grace Line.	December 19.	December 20.	88	725
Dora K.	R. Feuillebois.	December 19.	December 19.	(¹)	16
Cafau.	Standard Fruit & S. S. Co.	December 19.	December 20.	228	414
Cauca.	National Navigation Co.	December 19.	December 19.	287	
Tela.	United Fruit Co.	December 20.	December 20.	16	197
San Francisco.	Hamburg-American Line.	December 20.	December 20.	65	77
Bridgetown.	United Fruit Co.	December 20.	December 20.	19	

* No cargo discharged.

* No cargo laded.

* Four packages.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 20, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
San Clemente	13	15.00	14	6.05	14	13.35	14	14.40	American	Quaker Line.	410.0	54.4	17.2	Philadelphia, Pa.	Seattle, Wash.	General.	1,891	6,476	4,682
Losleobank	13	21.15	14	6.10	14	12.40	14	13.25	British	Bank Line, Ltd.	426.7	57.4	22.6	New York, N. Y.	Shanghai, China.	General.	5,427	7,623	5,412
Florence	14	7.30	14	7.45	14	14.32	14	15.35	American	Luckenbach Line.	401.8	52.0	20.6	New Orleans, La.	Los Angeles, Calif.	General.	3,062	6,002	4,621
Commissioner	13	22.25	14	7.50	14	14.26	14	14.36	American	Merritt Chapman, Scott	108.3	28.3	11.0	New Orleans, La.	Los Angeles, Calif.	Ballast.	.....	310	1,117
Canadotte	14	8.00	14	9.00	14	16.25	14	17.40	British	Imperial Oil Co.	510.9	68.2	22.0	Newport News, Va.	Talara, Peru.	Ballast.	.....	11,556	6,772
Calif.	12	18.45	14	10.05	14	17.48	14	18.50	German	Poland Line	216.0	32.0	12.7	Cristobal, C. Z.	Guayaquil, Ecuador	General.	170	1,105	698
Losada	14	3.03	14	10.15	14	17.58	15	2.55	British	Pacific Steam Nav. Co.	405.0	54.2	23.0	Hull, England.	Magallanes, Chile.	General.	6,150	7,278	4,844
Nosa King	13	20.45	14	12.00	14	19.30	15	4.10	American	N. O. & S. A. S. Co.	324.0	46.2	20.0	New Orleans, La.	Talcahuano, Chile.	General.	2,408	3,978	2,560
Moreno	14	6.25	14	13.20	14	22.14	14	22.30	American	Bethlehem Steel Corp.	550.3	72.2	22.0	Baltimore, Md.	Gruz Grande, Chile.	Ballast.	3,217	13,551	4,267
West Cape	14	10.35	14	15.15	14	22.50	15	00.30	American	McCormick S. S. Co.	409.5	54.2	19.3	Philadelphia, Pa.	San Francisco, Cal.	General.	3,217	9,705	5,907
Pelre	14	9.30	15	6.00	15	12.52	15	14.10	Italian	Nav. Libera Trieste	430.8	55.0	17.8	Trieste, Italy.	Vancouver, B. C.	General.	2,173	7,705	4,997
New Jersey	14	21.20	15	7.30	15	14.59	15	16.00	American	The Texas Co.	446.8	56.1	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	2,003	8,982	4,982
Kinai Maru	15	9.20	15	9.40	15	16.03	15	18.54	Japanese	Ozaka Shosen Kaisha	416.0	60.2	19.8	New York, N. Y.	Shanghai, China.	General.	3,045	6,830	4,932
Gange	14	12.05	15	10.55	15	18.57	15	19.32	French	Reunis Willeox	418.1	52.5	22.0	Havre, France.	Corral, Chile.	Ballast.	.....	927	.....
Rolling Stone	15	12.50	15	12.50	15	19.20	16	10.45	Panamanian	Robert Wilcox	400.0	54.3	15.0	Colon, Rep. Panama	Balboa, C. Z.	Ballast.	6,069	5,273	.....
Bradburn	15	17.22	15	18.45	15	19.20	16	10.45	British	N. W. R. Smith & Sons	375.8	54.3	15.0	Glasgow, Scotland	Vancouver, B. C.	General.	6,105	5,888	3,930
Tosca	15	18.00	16	6.25	16	14.20	16	16.25	Norwegian	Knit Knutsen	420.0	57.3	25.0	Oslo, Norway	Valdivia, Chile	General.	6,819	4,427	.....
Sveve	15	18.25	16	6.25	16	13.16	16	16.25	Norwegian	Anglo-Saxon Pet. Co.	420.0	57.5	18.4	Newcastle, Eng.	San Francisco, Cal.	Ballast.	2,714	6,624	5,040
West Chicago	15	20.20	16	7.20	16	15.08	16	16.25	American	McCormick S. S. Co.	410.0	54.2	26.0	Buenos Aires, Arg.	Los Angeles, Calif.	General.	8,916	7,345	5,357
Sagadahoc	15	21.05	16	7.40	16	13.01	16	17.45	American	Argonaut S. S. Line	420.5	54.2	26.9	Baltimore, Md.	Vancouver, B. C.	General, steel	3,075	7,304	5,099
Huguenot	16	5.55	16	8.35	16	10.43	17	17.45	American	Richfield Oil Co.	434.0	56.2	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.	3,075	6,033	4,553
Venezuela	15	5.40	16	9.18	16	10.49	17	18.00	American	Panama Mail S. S. Co.	380.0	45.7	21.0	New York, N. Y.	San Francisco, Cal.	General.	2,578	7,983	5,016
Arizona	16	9.20	16	10.05	16	18.00	16	18.55	American	Amer-Hawaiian Line.	434.2	57.7	19.0	Boston, Mass.	Seattle, Wash.	General.	1,758	11,060	8,076
América	16	9.33	16	12.43	16	19.03	16	20.00	Danish	East Asiatic Co.	463.0	62.0	19.6	Copenhagen, Den.	Vancouver, B. C.	General.	2,850	6,573	4,629
Wagland	16	6.30	16	13.35	16	21.10	16	22.30	German	North German Lloyd	393.0	54.0	19.10	Hamburg, Germany	Valparaiso, Chile.	General.	.....	.....	.....
Gen. G. W.	.....	.....	.....	.....	.....	.....	.....	.....	American	U. S. Army	89.0	22.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
Geety	.....	.....	.....	.....	.....	.....	.....	.....	Panamanian	C. & W. Wilson	12.6	4.0	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	.....	.....	.....
Henlock	16	18.15	16	19.30	17	8.57	17	10.34	American	Dimon S. S. Corp.	409.0	54.0	16.6	Philadelphia, Pa.	Seattle, Wash.	General.	3,740	6,630	4,916
Pacific	16	5.30	17	6.00	17	12.56	17	14.00	British	Furness, Withy & Co.	435.0	60.0	18.4	Glasgow, Scotland.	Vancouver, B. C.	General.	451	9,630	6,943
Pioneer	16	30.20	17	6.15	17	13.53	17	15.25	American	The Texas Co.	416.8	56.0	18.0	Wilmington, Del.	Los Angeles, Calif.	Ballast.	.....	.....	.....
Pennsylvania	16	30.20	17	6.15	17	13.53	17	15.25	American	The Texas Co.	416.8	56.0	18.0	Wilmington, Del.	Los Angeles, Calif.	Ballast.	.....	.....	.....
K. R.	.....	.....	.....	.....	.....	.....	.....	.....	American	Standard Oil Co.	440.0	58.2	22.0	Pasadena, N. J.	San Francisco, Cal.	Ballast.	.....	9,033	5,938
Kingsbury	17	3.55	17	7.20	17	14.52	17	18.00	American	Standard Oil Co.	440.0	58.2	22.0	Pasadena, N. J.	San Francisco, Cal.	Ballast.	.....	.....	.....
Charles	.....	.....	.....	.....	.....	.....	.....	.....	American	Arrow Line.	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General.	4,398	6,603	4,903
Christenson	17	4.30	17	7.25	17	15.16	17	16.40	American	Arrow Line.	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General.	.....	.....	.....
Tanker.	.....	.....	.....	.....	.....	.....	.....	.....	American	Arrow Line.	410.0	54.0	19.0	Baltimore, Md.	Seattle, Wash.	General.	.....	.....	.....

* General iron, and cement.

† Yacht.

‡ Tug.

§ Motor ship.

¶ Tanker.

Edward Luckenbach.	16	20	55	17	10	15	17	17	14	17	18	15	American	Luckenbach Line	436.0	57.0	20.10	Boston, Mass.	Tacoma, Wash.	General	3,150	8,543	6,427
Lebore.	17	3	20	17	12	25	17	19	38	17	20	35	American	Ore S. S. Corp.	549.0	72.0	24.0	Baltimore, Md.	Cruz Grande, Chile	Ballast	14,325	4,635	7,027
Wyoming.	17	8	10	17	14	10	17	20	45	17	21	45	French	French Line.	470.0	61.0	22.1	Havre, France.	Vancouver, B. C.	(*)	2,259	10,440	7,027
Swan	17	6	20	17	6	20	17	13	52	17	13	52	American	U. S. Navy.	180.0	35.6	22.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	6,236	5,979	4,419
Orient City	17	14	17	18	08	18	9	31	15	17	11	55	British	Sir W. R. Smith & Sons	396.4	53.5	22.0	Norfolk, Va.	Sia. Rosalia, Mex.	Coal	1,761	12,417	8,305
Oreoma.	17	14	10	18	5	55	18	13	37	18	15	55	British	Pacific Steam Nav. Co.	511.5	62.0	24.0	Liverpool, England	Talcahuano, Chile	General	6,605	4,340	
Sacramento	17	22	25	18	6	10	18	13	37	18	16	10	American	U. S. Navy.	224.0	41.0	14.2	Cristobal, C. Z.	Balboa, C. Z.	Ballast	2,257	2,692	1,808
Mittelman	18	00	30	18	7	15	18	16	10	18	16	10	German	Anglo-Saxon Pet. Co.	411.9	55.0	19.9	Grauton, Scotland	Los Angeles, Calif	(*)	4,511	4,851	3,326
Lake Gorin	18	2	15	18	7	20	18	15	23	18	16	35	American	Ford Motor Co.	250.0	43.6	19.8	Chester, Pa.	Seattle, Wash.	Fuel oil	797	5,831	4,341
El Lobo	18	5	30	18	7	20	18	15	23	18	16	35	British	Atlantic Refining Co.	385.2	51.0	19.3	Curacao, D. W. I.	Guayaquil, Ecuador	General, bananas	5,945	6,216	
Partienna	17	16	40	18	9	30	18	17	25	18	18	48	British	Donaldson Brothers.	399.5	61.0	18.6	Glasgow, Scotland	Vancouver, B. C.	Ballast	5,994	3,876	
Tabian	18	6	20	18	11	20	18	18	07	18	19	12	Dutch	Netherlands S. S. Co.	465.0	52.0	18.6	Amsterdam, Holland	Seattle, Wash.	(*)	6,747	9,082	6,140
Sommerstad	18	14	05	18	14	15	18	21	04	19	1	30	Norwegian	Union Oil Co.	381.0	55.2	18.6	Rotterdam, Holland	Los Angeles, Calif.				
Benjamin	18	6	45	18	15	05	18	22	58	20	14	00	Norwegian	Fred Olsen & Co.	452.0	59.5	24.5	Oslo, Norway	Vancouver, B. C.	(*)			
Franklin	18	16	20	18	17	40	19	9	45	19	12	05	American	Standard Oil Co.	513.0	68.2	22.0	London, England	Los Angeles, Calif.	Ballast	11,719	8,619	
California	18	18	30	19	6	05	19	13	19	14	30	Danish	E. J. DuPont	385.0	54.4	18.5	New York, N. Y.	Toacopia, Chile	General	1,911	6,515	4,756	
Nordkap	18	21	10	19	6	25	19	14	20	19	15	40	American	Tampa Intercean Co.	440.0	56.0	22.0	Galveston, Tex.	Manila, P. I.	General	6,009	8,329	6,157
Invisible	18	22	15	19	7	25	19	15	20	19	20	00	American	Pacific-Atlantic S. S. Co.	377.0	62.0	15.0	Baltimore, Md.	Tacoma, Wash.	General	1,341	5,455	3,579
San Diego	18	22	45	19	7	50	19	14	42	19	15	40	British	Kerr S. S. Co.	456.0	59.2	17.2	Boston, Mass.	Singapore, S. S. S.	General	2,576	9,576	6,618
Silverpress	19	00	25	19	8	35	19	17	29	19	17	55	American	Richfield Oil Co.	430.0	56.0	25.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast	1,636	7,773	5,634
Fat Dobony	19	00	25	19	8	35	19	17	29	19	17	55	American	Richfield Oil Co.	430.0	56.0	25.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast	1,636	7,773	5,634
Teno.	18	21	35	19	10	30	19	17	31	19	18	40	Chilean	Cia. Sud. Amer. de Vap.	421.8	51.0	15.0	New York, N. Y.	Valparaiso, Chile	General	5,616	4,117	
Tajin Maru	18	23	35	19	10	40	19	17	47	19	19	00	Japanese	Ocean Transp. Co.	375.0	54.0	14.6	Waterford, Ireland	Los Angeles, Calif	Ballast	5,187	6,864	5,260
Heranger	19	4	30	19	11	05	19	18	34	19	19	55	Norwegian	Westfal, Larsen & Co.	415.0	54.8	14.6	Rotterdam, Holland	Los Angeles, Calif	Ballast	5,187	6,864	5,260
Foyebank	19	6	00	19	11	30	19	19	08	19	20	00	British	Bank Line, Ltd.	426.0	57.0	22.1	New Orleans, La.	Shanghai, China	Cotton	7,820	5,661	
Witram	19	9	10	19	12	10	19	19	45	19	21	00	German	North German Lloyd	449.0	58.0	16.0	Bremerhaven, Ger.	Vancouver, B. C.	Ballast	3,948	6,203	4,672
Aden Maru	19	10	35	19	12	12	19	20	30	19	21	50	Japanese	Kokusai Kisen Kaisha.	385.0	51.0	21.0	Norfolk, Va.	Shanghai, China.	Cotton, rosin, etc.	5,940	4,108	
Lumina	19	8	45	19	13	00	19	21	30	19	22	40	British	Anglo-Saxon Pet. Co.	407.1	52.3	19.6	Grainemouth, Eng.	Los Angeles, Calif	Ballast	1,633	8,515	6,000
Kinderdijk.	18	11	50	19	14	08	19	21	51	19	22	40	Dutch	Holland-America Line.	499.4	58.4	19.7	Rotterdam, Holland	Portland, Oreg.	General, bananas	2,500	5,113	3,571
Point	19	14	25	19	14	45	19	23	10	20	00	10	American	Atlantic Refining Co.	364.0	51.0	20.0	Philadelphia, Pa.	San Francisco, Cal.	Lubricating oil.	2,500	5,113	3,571
Breeze	18	17	20	19	15	05	19	22	30	19	23	48	German	Roland Line.	216.0	46.0	22.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	203	1,132	741
Manizales	19	14	15	20	6	15	20	14	03	20	15	25	American	Jose Perino	480.5	66.0	21.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast	3,966	3,384	2,612
Clemens	19	14	15	20	6	15	20	14	03	20	15	25	American	Standard Transp. Co.	480.5	66.0	21.0	New York, N. Y.	Los Angeles, Calif	Ballast	9,777	7,612	
Bright	19	14	15	20	6	15	20	14	03	20	15	25	American	Standard Transp. Co.	480.5	66.0	21.0	New York, N. Y.	Los Angeles, Calif	Ballast	9,777	7,612	
Axel	19	19	55	20	7	35	20	14	55	20	22	05	Swedish	Johnson Line.	322.0	52.6	21.5	Stockholm, Swed.	San Francisco, Cal.	(*)	4,333	6,642	4,860
Johnson	19	19	55	20	7	35	20	14	55	20	22	05	Swedish	Johnson Line.	322.0	52.6	21.5	Stockholm, Swed.	Tacoma, Wash.	General	3,966	3,384	2,612
Point Sur.	20	2	50	20	7	20	20	15	28	20	16	55	American	Gulf-Pacific Line.	324.0	46.0	22.0	Corpus Christi, Tex.	Tacoma, Wash.	General	3,966	3,384	2,612
Broad Arrow	20	4	10	20	7	20	20	15	51	20	16	55	American	General Petroleum Co.	467.6	62.7	22.0	New York, N. Y.	Los Angeles, Calif	Ballast	9,700	6,804	
Christine	20	6	40	20	8	35	20	16	15	20	19	30	Danish	Larsen & Moller	378.2	50.0	22.0	Sydney, C. B.	Manila, P. I.	General	4,733	5,526	4,066
Maersk	20	9	00	20	9	30	20	16	42	20	19	25	American	Amer-Hawaii Line.	407.7	53.7	20.0	Boston, Mass.	Portland, Oreg.	General	2,826	7,103	4,991
Ohtani.	20	10	00	20	10	15	20	17	17	20	18	25	British	Vacuum Oil Co.	460.0	62.8	22.0	Wilhelms, N. Ger.	Estero Bay, Calif.	Ballast	1,270	5,726	4,086
San Peres	19	16	45	20	13	50	20	20	46	21	2	18	American	Grace Line	360.2	51.6	22.0	New York, N. Y.	Valparaiso, Chile	General	1,270	5,726	4,086
Lightbourne	20	13	40	20	14	15	20	21	48	20	22	40	American	The Texas Co.	416.8	56.1	18.10	New York, N. Y.	Valparaiso, Chile	Ballast	6,931	4,983	
San Jose.	19	19	10	20	15	05	20	22	00	21	7	39	American	United Fruit Co.	330.0	44.6	16.3	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,675	2,359	
Norfolk.	20	17	25	20	18	45	21	9	40	21	15	20	British	Federal Steam Nav. Co.	520.0	64.0	20.0	Palmouth, England	New Zealand	Ballast	12,963	9,291	
San Francisco	20	7	55	20	20	05	21	11	39	21	12	50	German	Hamburg-America Line	432.3	59.1	23.0	Hamburg, Germany	Vancouver, B. C.	General	5,153	8,454	6,344

* General, steel, and cement. ** General, cement, paper, etc.

1. Automobile parts and machinery. 2. Steel, rails, and general. 3. Launch. 4. Gunboat. 5. Mine sweeper. 6. Tunker. 7. Tunker. 8. Tunker. 9. Tunker. 10. Tunker. 11. Tunker. 12. Tunker. 13. Tunker. 14. Tunker. 15. Tunker. 16. Tunker. 17. Tunker. 18. Tunker. 19. Tunker. 20. Tunker. 21. Tunker. 22. Tunker. 23. Tunker. 24. Tunker. 25. Tunker. 26. Tunker. 27. Tunker. 28. Tunker. 29. Tunker. 30. Tunker. 31. Tunker. 32. Tunker. 33. Tunker. 34. Tunker. 35. Tunker. 36. Tunker. 37. Tunker. 38. Tunker. 39. Tunker. 40. Tunker. 41. Tunker. 42. Tunker. 43. Tunker. 44. Tunker. 45. Tunker. 46. Tunker. 47. Tunker. 48. Tunker. 49. Tunker. 50. Tunker. 51. Tunker. 52. Tunker. 53. Tunker. 54. Tunker. 55. Tunker. 56. Tunker. 57. Tunker. 58. Tunker. 59. Tunker. 60. Tunker. 61. Tunker. 62. Tunker. 63. Tunker. 64. Tunker. 65. Tunker. 66. Tunker. 67. Tunker. 68. Tunker. 69. Tunker. 70. Tunker. 71. Tunker. 72. Tunker. 73. Tunker. 74. Tunker. 75. Tunker. 76. Tunker. 77. Tunker. 78. Tunker. 79. Tunker. 80. Tunker. 81. Tunker. 82. Tunker. 83. Tunker. 84. Tunker. 85. Tunker. 86. Tunker. 87. Tunker. 88. Tunker. 89. Tunker. 90. Tunker. 91. Tunker. 92. Tunker. 93. Tunker. 94. Tunker. 95. Tunker. 96. Tunker. 97. Tunker. 98. Tunker. 99. Tunker. 100. Tunker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charter or operator.)		Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.		(Charter or operator.)	Length.		Beam.	Salt water draft.				From—	For—	Nature.	Tons.	Gross.	Net.
Chateau Thierry.	13	22	14	6	22	14	15	00	15	1.05	American.	436.9	58.2	26.0	Bahoa, C. Z.	New York, N. Y.	Army supplies.	154	7,154	6,715	5,058
Bronxville.	13	22	14	6	36	14	16	15	14	16.15	Norwegian.	410.0	54.2	26.0	Pt. Alberni, B. C.	Philadelphia, Pa.	Lumber.	7,154	6,715	5,058	
Mari.	14	1	30	14	7	37	14	17	45	11.35	Spanish.	350.4	50.1	22.0	Caleta Buena, Ch'e	Azores	Nitrate of soda.	5,800	4,346	3,084	
Abri.	14	00	30	8	07	14	17	45	15	17.45	Anglo-Chilean Const'd	393.8	50.2	17.0	Seattle, Wash.	New Orleans, La.	Lumber, general.	1,835	5,732	4,131	
Lake Ormeau.	14	3	20	14	9	44	14	19	40	14.20.55	Gulf-Pacific Line.	250.1	43.8	23.0	Seattle, Wash.	Philadelphia, Pa.	Lumber, auto. pis.	2,992	2,750	1,741	
Norman Star.	14	10	30	14	11	46	14	19	58	15	4.35	Krauss Bros. Co.	450.0	56.3	25.4	Seattle, Wash.	Newcastle, Eng.	Frozen fruit.	3,870	7,517	5,458
Standard Arrow.	14	19	05	15	6	09	15	14	20	15	14.20	Blue Star Line.	457.6	62.7	27.0	Los Angeles, Calif.	Portland, Me.	Gasoline, gas oil	11,450	9,698	6,783
Henry S. Grove	14	23	00	15	6	42	15	15	10	15	15.10	Standard Transp. Co.	404.6	53.9	29.0	Seattle, Wash.	Baltimore, Md.	Lumber, ore.	7,520	6,755	4,688
Gen. G. W. Getty.	15	9	30	15	10	14	15	17	55	15	22.20	Argonaut S. S. Co.	98.0	22.0	41.0	Seattle, Wash.	Portland, Me.	Gasoline, gas oil	11,450	9,698	6,783
Parana.	15	2	30	15	12	15	15	20	30	16	21.05	U. S. Army.	375.3	48.3	23.0	Bahoa, C. Z.	Cristobal, C. Z.	Apples, smelter.	2,789	4,717	3,359
Florena.	15	2	30	15	12	15	15	20	30	16	21.05	Francisco Lobato	303.0	43.0	15.0	Vancouver, B. C.	Hamburg, Germany	Ballast.	2,789	4,717	3,359
Alvarado.	16	3	10	16	6	26	16	13	40	16	21.05	Pacific Steam Nav. Co.	418.9	53.9	21.0	Buenaventura, Col.	Cristobal, C. Z.	Ballast.	2,789	4,717	3,359
Edda.	16	8	35	16	9	40	16	16	30	16	21.05	Can-Am. Ship. Co.	406.5	54.2	27.0	Callao, Peru.	New York, N. Y.	Fruits.	2,923	2,844	1,748
Loriga.	16	8	50	16	9	46	16	16	35	16	21.05	Pacific Steam Nav. Co.	406.5	54.2	27.0	Seattle, Wash.	Rotterdam, Holland.	General.	8,132	7,331	5,091
Schwaben.	16	9	50	16	10	30	16	19	05	17	2.33	North German Lloyd.	491.4	63.8	28.0	Talcahuano, Chile.	Hull, England.	General.	10,513	10,002	6,743
Pennsylvania.	16	10	10	16	10	51	16	20	10	20.10	Amer-Hawaiian Line.	407.7	53.7	25.0	Vancouver, B. C.	Hamburg, Germany	General.	10,513	10,002	6,743	
Ashville.	16	12	37	16	20	40	16	22	50	16	22.50	U. S. Navy.	445.0	58.0	25.0	Portland, Ore.	Boston, Mass.	General.	6,588	7,107	5,041
Horace Luckenbach.	16	16	45	16	17	24	17	11	40	17	12.50	Luckenbach Line.	445.0	58.0	25.0	Bahoa, C. Z.	Cristobal, C. Z.	Ballast.	6,439	8,699	6,363
Pacific Grove.	16	17	30	16	18	25	17	12	10	17	12.10	Furness, Withy & Co.	450.0	60.8	28.0	Portland, Ore.	Boston, Mass.	General.	6,439	8,699	6,363
Illinois.	17	8	30	17	9	31	17	16	40	17	16.50	French Line.	400.5	57.6	17.0	Vancouver, B. C.	Glasgow, Scotland.	Nitrates, copper.	8,147	10,056	7,226
Durazo.	17	8	30	17	9	31	17	16	40	17	16.50	Hamburg-American Line.	400.5	57.6	17.0	Valparaiso, Chile.	Le Havre, France.	General.	8,147	10,056	7,226
Sacramento.	17	13	50	17	15	41	17	22	25	18	6.10	U. S. Navy.	224.0	40.0	33.0	Bahoa, C. Z.	Cristobal, C. Z.	General.	269	1,632	1,011
El Salvador.	17	13	50	17	15	41	17	22	25	18	6.10	Panama Mail S. S. Co.	360.2	51.6	23.0	Bahoa, C. Z.	Cristobal, C. Z.	General.	269	1,632	1,011
Caldas.	17	20	15	18	6	35	18	13	55	18	13.55	National Navigation Co.	116.0	21.1	7.6	San Francisco, Cal.	New York, N. Y.	General.	3,000	4,904	2,902
Gertrude Kellogg.	17	20	55	18	6	40	18	15	30	18	15.30	Spencer Kellogg & Sons	391.9	51.2	25.6	Pto. Armales, R.P.	Cristobal, C. Z.	Ballast.	3,000	4,904	2,902
Emil Kirdorf.	18	6	00	18	7	24	18	16	00	18	15.30	Hamburg-American Line.	401.8	53.8	23.0	Manila, P. I.	New York, N. Y.	Coconut oil.	6,700	5,393	3,719
Manizales.	18	6	15	18	7	55	18	17	20	19	15.05	Roland Line.	216.5	32.9	12.0	Corral, Chile.	Hamburg, Germany	General.	6,638	7,141	5,408
Selma City.	18	6	30	18	8	34	18	18	15	18	23.30	Norton, Lilly & Co.	424.2	56.2	26.2	Guayaquil, Ecuador	Cosobol, C. Z.	General.	6,388	7,141	5,408
Storstad.	18	8	10	18	9	18	19	18	20	18	23.30	Standard Shipping Co.	487.0	62.2	27.5	Vancouver, B. C.	Avonmouth, Eng.	General.	7,800	7,611	5,450
Bensvorlich.	11	30	20	18	14	53	18	22	55	19	00.10	Can-Am. Ship. Co.	400.6	52.2	24.0	Cabo Blanco, Peru.	Halifax, N. S.	Crude oil.	12,500	9,198	6,287
Nosa Queen.	18	14	40	18	15	23	18	22	55	19	1.20	Royal Neth. S. S. Co.	324.0	46.2	26.5	Vancouver, B. C.	Rotterdam, Holland.	Lumber, general.	7,135	5,770	4,073
Boegaeven.	18	15	45	18	16	05	18	23	55	19	22.17	Royal Neth. S. S. Co.	324.0	46.2	26.5	Cocopilla, Chile.	New Orleans, La.	Nitrates, gen.	3,602	3,981	2,600
San Jose.	18	16	00	19	6	21	19	19	20	19	22.17	United Fruit Co.	330.0	44.6	30.0	Corral, Chile.	Hamburg, Germany	Nitrates, gen.	7,816	7,834	6,018
Yankee Arrow.	18	18	13	19	6	21	19	19	20	19	22.17	Standard Oil Co., N. Y.	468.3	62.7	27.2	San Francisco, Cal.	Cristobal, C. Z.	Gen. gasoline.	661	3,209	2,069
Tanker.	18	18	13	19	6	21	19	19	20	19	22.17	Standard Oil Co., N. Y.	468.3	62.7	27.2	Los Angeles, Calif.	Boston, Mass.	Gasoline.	11,285	8,046	4,960
Tanker.	18	18	13	19	6	21	19	19	20	19	22.17	Standard Oil Co., N. Y.	468.3	62.7	27.2	Los Angeles, Calif.	Boston, Mass.	Gasoline.	11,285	8,046	4,960
Tanker.	18	18	13	19	6	21	19	19	20	19	22.17	Standard Oil Co., N. Y.	468.3	62.7	27.2	Los Angeles, Calif.	Boston, Mass.	Gasoline.	11,285	8,046	4,960

¹⁴ Motor ship.¹⁵ Junior mine planter.¹⁶ Gunboat.¹⁷ Cruiser.¹⁸ For orders.¹⁹ Beans, lentils, and nitrates.

Tourist Season for 1930-1931.

The tourist season for 1930-1931 was inaugurated on December 9, 1930, by the arrival at Cristobal of the Cunard Steamship Company's liner *Franconia*, with a party of 313 tourists on a cruise of the Caribbean Sea. Seven other special cruise parties will call at Cristobal this month, including the *S. S. Belgenland* with 176 passengers, arriving at Cristobal on December 23d on the first leg of her annual cruise around the world. The 6 other vessels are all on Caribbean cruises and are due at Cristobal between the 23d and the end of the month.

There has been an increasing popularity in the Caribbean cruises, many of the leading steamship lines diverting their large trans-Atlantic liners to these cruises during the winter months. Originating, ordinarily, at New York, the itinerary of these cruises include ports of call in the West Indies, northeastern South America, and Central America. Shore excursions at the Isthmus usually include an inspection of the locks at Gatun, a boat trip through Gaillard Cut, with luncheon and automobile sightseeing trips on the Pacific side.

The scheduled tours of the 1930-1931 season include 5 around-the-world cruises, and 38 special cruises in the Caribbean area; the latter involve calls at Cristobal, but do not include transit of the Canal. Advance estimates indicate there will be approximately 15,000 tourists arriving on these special cruises, in addition to which the United Fruit Company will bring 24 parties, averaging 50 to 75 persons each.

In addition to the tourists arriving on these special cruises, the Panama-Pacific Line, the Grace Line, the Panama Mail Line, the Dollar Line, the Chilean Line, the Pacific Steam Navigation Company, and other passenger-carrying lines regularly calling at Canal ports bring many hundreds of persons to the Isthmus weekly.

The advance estimate indicates there will be an increase of some 3,000 special cruise tourists over the 1929-1930 season, but it is generally prophesied in local interested circles that the actual number making these tours will be somewhat under the original estimate, owing to the world-wide adverse business conditions now prevailing.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at $14\frac{1}{2}$ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective December 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 16 years of operation.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.

The Hydrographic Office at Cristobal maintain at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometric comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 313.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 20.	No. 670-M ²⁹	Pan American Airways.	Miami via wyports.				
December 20.	Cordoba C-40 ²⁹	Seadta Airplane Co.	Barranquilla and wayp'ts.				
December 20.	No. 300-N ²⁹	Pan American-Grace Airways.	Talara via wayports.				
December 20.	No. 9388 ²⁹	Pan American Airways.	San Salvador and wayp'ts.				
December 20.	Brillatouin.	Colombian S. S. Line.	New York and wayports.				
²⁹ Air mail carrier.				PORT OF BALBOA.			
December 15.	Relay.	All America Cables.	The high seas.	December 15.	Relay.	All America Cables.	The high seas.
December 17.	Heiyo Maru ³⁰	Nippon Yusen Kaisha.	Valparaiso, Chile.	December 17.	Heiyo Maru ³⁰	Nippon Yusen Kaisha.	Hongkong, China.
December 16.	City of Panama ³⁰	Panama Mail S. S. Co.	Buenaventura, Colombia.	December 20.	City of Panama ³⁰	Panama Mail S. S. Co.	San Francisco, Calif.
December 18.	Real ³¹	Hans Elliot.	Panama Bay, R. P.	December 18.	Real ³¹	Hans Elliot.	Panama Bay, R. P.
December 18.	Olamartina ³¹	A. Valdez.	Panama Bay, R. P.	December 18.	Olamartina ³¹	A. Valdez.	Panama Bay, R. P.
³⁰ Motor ship.	³¹ Motor schooner.	* Other than ships passing through the Canal.					

³⁰ Motor ship.

³¹ Motor schooner.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., December 31, 1930. No. 22.

Traffic for Calendar Year 1930 will be Lowest Since 1926.

An estimate of the current calendar year's traffic, based on figures available for the first 29 days of December, indicates that there will be approximately 5,875 commercial transits during the year ending December 31, 1930, on which tolls amounting to approximately \$26,106,900 will be collected. This will be the smallest calendar year's traffic since 1926 when 5,420 vessels, paying \$23,901,540.04 in tolls, passed through the canal; and the smallest traffic for any 12-month period (fiscal or calendar year) since June 30, 1927, when a total of 5,475 vessels, paying \$24,228,830.11 in tolls, transited the canal.

From July, 1927, up to the beginning of the current calendar year, transits failed to reach the 500 mark in only two instances; during the current calendar year, however, transits have exceeded 500 in only three months, as follows: January, 531; March, 515; and October, 517.

For the calendar year 1930, it is estimated that the number of monthly commercial transits will average 489, as compared with 536 for 1929, 527 for 1928, 507 for 1927, and 451 for 1926.

New Bank Line Vessel Transits Canal.

The new motor ship *Foylebank*, the most recent addition to a fleet of new freight vessels recently placed in service by the Bank Line, transited the Canal on December 19, 1930, on her maiden voyage in the company's trade between the east coast of the United States and the Far East. She carried a cargo of approximately 5,187 tons of cotton laded at United States Gulf ports and destined to Kobe, Yokohama, and Shanghai. An item commenting on the speed of this new vessel appeared in a recent issue of the *Nautical Gazette*, in which it was stated that the *Foylebank* made the fastest run on record from Pilottown at the mouth of the Mississippi River to the port of New Orleans. The distance of 90 miles was covered in 5 hours and 5 minutes, an average speed of just under 18 miles per hour, which was considered especially noteworthy since the ship was going up instead of down, where speed runs are much easier. The article further states that the new vessel sailing out of Belfast made the trip across the Atlantic in heavy wintry seas at an average speed of 18 miles per hour.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, December 27, 1930.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)		Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.		Day.	Hour.						Nature.	Tons.	Gross.	Net.
Gauca ²	19	19 25	21	6 10	21	13 21	Colombian.	National Navigation Co.	107 0	22 0	10 8	Cristobal, C. Z.	Buenaventura, Col.	General.	300	262	161	
Port Dunedin ²	21	8 40	21	9 00	21	15 36	British.	Com'th & Dom. Line.	466 0	59 6	24 6	Glasgow, Scotland.	Dunedin, N. Z.	General.	4,935	9,959	7,226	
Durazzo ²	17	17 50	21	10 10	21	17 11	German.	Hamburg-Amerikan Line	273 0	34 0	13 4	Cristobal, C. Z.	Guayaquil, Ecuador	General.	208	1,633	1,041	
Langauer ²	21	11 50	21	12 00	21	18 27	Norwegian.	Ore-Saxon Pet. Co.	426 6	64 6	19 0	Rotterdam, Holland.	Los Angeles, Calif.	Ballast.	9,626	6,839	4,496	
Amerikaland ²	21	15 20	21	16 45	22	9 36	Swedish.	Ore S. S. Corp.	561 0	72 0	22 3	New York, N. Y.	Cruz Grande, Chile	Ballast.	15,560	4,967	4,375	
Hardanger ²	22	12 25	22	12 40	22	20 54	Norwegian.	Westfal, Larsen & Co.	375 0	52 0	12 0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	5,977	4,375		
Mallard ²	22	12 20	22	12 30	22	20 55	American.	U. S. Navy.	180 0	35 6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	5,753	3,893		
Colonial ²	22	6 45	22	20 30	23	9 54	British.	T. & J. Harrison.	396 0	52 0	17 6	Liverpool, England	Vancouver, B. C.	Ballast.	20	1,919	875	
All America ²	22	10 45	22	20 40	23	11 46	American.	All America Cables Co.	280 0	37 8	20 0	Curacao, D. W. I.	Callao, Peru.	Cables.	28,913	18,874		
Belgenland ²	23	5 35	23	6 00	23	15 54	British.	Red Star Line.	670 0	78 4	30 0	New York, N. Y.	World cruise	Ballast.	6,931	4,990		
Rennet ²	22	15 55	23	7 25	23	16 35	American.	The Texas Co.	416 8	56 1	21 0	Key West, Fla.	Los Angeles, Calif.	Ballast.				
Birmingham	22	22 45	23	7 00	23	16 59	American.	Isthmian S. S. Lines.	395 5	55 0	27 0	New York, N. Y.	Tacoma, Wash.	General.	8,505	7,304	5,188	
Mirabooka ²	23	2 57	23	8 30	23	17 26	Swedish.	Transpacific S. S. Co.	435 0	57 0	18 0	W. Hartlepool, Eng.	Sydney, Australia.	Steel.	1,050	8,274	6,098	
Maple Branch.	23	4 25	23	8 35	23	17 46	British.	Nantilus S. S. Co.	400 0	52 0	20 0	Newcastle, Eng.	Magallanes, Chile.	General.	2,687	5,618	4,116	
Puri.	23	9 55	23	10 05	23	18 29	British.	Norton, Lilly & Co.	475 6	60 9	20 0	New Orleans, La.	Fremantle, Australia.	General.	4,083	8,946	6,145	
Chr. Knudsen ²	23	12 13	23	12 25	23	19 26	Norwegian.	Canadian Transp. Co.	381 0	54 0	18 8	Cornbrook, N. F.	Seattle, Wash.	Paper.	4,628	6,083	4,561	
Cortona	23	10 30	23	13 20	23	20 23	British.	Donaldson Line.	414 0	55 7	18 0	Glasgow, Scotland.	Vancouver, B. C.	Ballast.	1,914	7,150	5,024	
Minnesota.	23	13 30	23	14 30	23	21 44	American.	Amer-Hawaiian Line.	407 0	53 7	18 0	Boston, Mass.	Seattle, Wash.	General.	5,740	6,585	4,791	
Vernar.	24	3 05	24	6 20	24	13 46	American.	Calmar S. S. Corp.	410 5	54 2	21 0	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,630	9,294	6,865	
Lillian	24	6 30	24	10 30	24	17 04	American.	Luckenbach Line.	449 0	60 0	23 5	New York, N. Y.	Tacoma, Wash.	General.	8,160	7,611	5,450	
Luckenbach.	24	11 10	24	11 25	24	18 40	American.	Isthmian S. S. Lines.	425 0	56 2	25 2	Baltimore, Md.	Sourabaya, Java.	General.	5,228	12,879	9,577	
Memphis City.	24	10 45	24	13 10	24	20 10	British.	Glasgow United Co.	402 4	55 0	16 0	Norfolk, Va.	Vancouver, B. C.	Ballast.	1,743	7,596	5,179	
Janeta.	24	7 00	24	14 25	24	21 25	British.	Shaw, Savill & Albion.	500 3	63 3	27 11	London, England.	Auckland, N. Z.	General.	3,819	9,209	6,245	
Ionic.	24	7 00	24	14 25	24	21 25	British.	Shaw, Savill & Albion.	500 3	63 3	27 11	London, England.	Auckland, N. Z.	General.	2,321	3,983	2,629	
Greystoke	24	14 35	24	14 50	24	21 55	British.	Lancashire S. S. Co.	428 0	56 0	19 0	New York, N. Y.	Shanghai, China.	General.	1,347	12,977	9,373	
Castle ²	24	14 35	24	14 50	24	21 55	British.	Lancashire S. S. Co.	428 0	56 0	19 0	New York, N. Y.	Shanghai, China.	General.	2,638	7,849	5,806	
Malayan	24	14 50	24	15 05	24	22 35	British.	Rio Cape Line.	441 0	60 0	22 6	New York, N. Y.	Manila, P. I.	General.	4,448	6,161	4,611	
Prince ²	24	16 30	24	19 45	25	9 00	British.	Nelson Line.	324 0	60 2	19 6	New York, N. Y.	Seattle, Wash.	General.	2,396	10,687	6,633	
Swived	24	16 30	24	19 45	25	9 00	American.	Nelson Line.	324 0	60 2	19 6	New York, N. Y.	Seattle, Wash.	General.	9,841	6,946		
Orazio ²	23	6 55	25	6 15	25	13 29	Italian.	Roy. Generale Italiana.	482 8	61 1	10 24 0	Genoa, Italy.	Valparaiso, Chile.	General.	7,097	5,003		
Bemelon.	24	7 35	25	9 00	25	15 59	Dutch.	Navy, Neth. S. S. Co.	449 7	58 0	18 0	Amsterdam, Holland.	Corral, Chile.	General.	3,766	17,054	11,542	
Halcic.	25	10 30	25	10 45	25	17 28	British.	Andrew Weir & Co.	399 3	62 2	21 0	Pt. Arthur, Tex.	Auckland, N. Z.	Case oil.				
Santa Barbara	25	11 30	25	15 45	25	22 00	American.	Grace Line.	466 0	64 0	23 0	New York, N. Y.	Tacahano, Chile.	Gen. bananas.				
Empire Arrow	26	4 35	26	6 30	26	13 46	American.	Standard Oil Co.	468 3	63 7	20 0	New York, N. Y.	Los Angeles, Calif.	Ballast.				
Narbank ²	26	5 15	26	6 30	26	13 46	British.	Standard Oil Co.	420 0	63 0	16 0	Bilbao, Spain.	Los Angeles, Calif.	Ballast.				
President	26	5 35	26	7 25	26	15 03	American.	Dollar S. S. Line.	600 0	63 0	31 0	New York, N. Y.	Round the world.	General.				
Fillmore ²	26	5 35	26	7 25	26	15 03	American.	Dollar S. S. Line.	600 0	63 0	31 0	New York, N. Y.	Round the world.	General.	3,766	17,054	11,542	
Tanker.								Cable ship.										

* Cable ship.

* Minesweeper.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Net.
Sacramento.	22	14.00	22	15.18	23	9.00	American.	Charles Nelson & Co.	380.0	53.3	24.0	Seattle, Wash.	New York, N. Y.	General, lumber.	6,020	5,653	4,122
California.	22	12.35	23	6.09	23	14.40	American.	Panama-Pacific Line.	574.4	80.3	28.2	San Francisco, Cal.	New York, N. Y.	General.	5,090	24,506	17,565
Edwin.	23	00.30	23	6.50	23	17.25	American.	Arrow Line.	410.0	54.2	25.0	Longview, Wash.	New York, N. Y.	Lumber.	7,895	6,003	4,932
Christenson.	23	6.30	23	7.15	23	16.45	American.	Atlantic Refining Co.	425.0	57.2	28.0	Los Angeles, Calif.	Philadelphia, Pa.	Gasoline.	8,330	7,431	4,975
S. G. T. Dodd.	23	1.30	23	8.09	23	22.45	Japanese.	Balfour Williamson Co.	335.0	51.9	27.0	Portland, Oreg.	Dublin, Ireland.	Wheat.	7,800	6,206	4,655
Capevon Maru.	23	1.30	23	8.09	23	22.45	Japanese.	Balfour Williamson Co.	335.0	51.9	27.0	Portland, Oreg.	Dublin, Ireland.	Wheat.	7,800	6,206	4,655
Harry.	23	2.00	23	8.43	23	18.25	American.	Lockenbach Line.	448.9	60.2	30.0	Los Angeles, Calif.	Boston, Mass.	Lumber, general.	8,179	9,262	6,533
Lukenbach.	23	3.00	23	9.30	23	22.05	British.	Chilean Nit. Prod. Ass'n.	407.3	53.3	24.3	Antofagasta, Chile.	Aores.	Nitrates.	7,940	5,803	4,124
Edonpark.	23	9.15	23	10.02	23	22.05	American.	Am.-Hawaiian Line.	407.7	53.7	25.0	Portland, Oreg.	Boston, Mass.	General.	7,164	7,156	5,094
Dakota.	23	7.30	23	14.10	23	21.20	Panamanian.	Barber S. S. Lines.	460.0	60.4	22.0	Dayao, P. I.	New York, N. Y.	(14)	2,535	9,806	9,955
Tai Ping Yang.	23	15.25	23	16.13	24	11.30	British.	Imperial Oil Co., Ltd.	510.9	68.2	30.0	Talara, Peru.	Halifax, N. S.	Crude oil.	15,100	11,556	9,772
Canada.	23	15.25	23	16.13	24	11.30	British.	Imperial Oil Co., Ltd.	510.9	68.2	30.0	Talara, Peru.	Halifax, N. S.	Crude oil.	15,100	11,556	9,772
Acocagua.	23	21.10	24	6.12	24	13.15	British.	Cia. Sud. Amer. de Vap.	422.8	56.2	24.4	Valparaiso, Chile.	New York, N. Y.	General.	2,947	7,764	4,705
Tacoma City.	23	20.24	24	6.45	24	14.10	British.	Reardon Smith Line.	415.2	54.3	26.0	Vancouver, B. C.	Cardiff, Wales.	General.	7,660	6,947	5,358
Gegalla.	23	20.24	24	6.45	24	14.10	British.	Reardon Smith Line.	415.2	54.3	26.0	Vancouver, B. C.	Cardiff, Wales.	General.	7,660	6,947	5,358
Regalia.	24	4.20	24	7.02	24	15.05	British.	Donaldson Bros. Ltd.	425.0	56.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,660	7,827	5,442
Koranton.	24	10.10	24	10.51	24	18.25	British.	R. Chapman & Co.	412.0	55.0	28.0	Vancouver, B. C.	Gibraltar.	Wheat.	9,800	6,811	4,810
Sidney M.	24	11.15	24	12.04	24	19.15	American.	Munson, McCork's Line.	401.0	53.2	27.0	Tacoma, Wash.	Baltimore, Md.	(14)	8,329	7,079	5,166
Hauptman.	24	11.15	24	12.04	24	19.15	American.	Munson, McCork's Line.	401.0	53.2	27.0	Tacoma, Wash.	Baltimore, Md.	(14)	8,329	7,079	5,166
Cachapal.	15	21.35	24	12.28	24	20.35	Chilean.	Jose Malfatti Agrifoglio.	334.6	40.2	19.0	Valparaiso, Chile.	Genoa, Italy.	Horses, nitrates.	680	3,072	2,086
San Felipe.	24	13.00	24	13.54	24	21.25	American.	States S. S. Co.	410.8	54.2	26.2	Seattle, Wash.	Charleston, S. C.	Lumber, general.	6,957	6,821	4,927
Port.	24	15.20	24	16.53	25	11.40	British.	Com'lth & Dom. Line.	481.2	62.3	27.0	Lyttleton, N. Z.	London, England.	General.	7,196	10,821	8,048
Nielson.	24	15.20	24	16.53	25	11.40	British.	Com'lth & Dom. Line.	481.2	62.3	27.0	Lyttleton, N. Z.	London, England.	General.	7,196	10,821	8,048
Tsuyama Maru.	24	15.40	25	6.15	25	13.30	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	21.0	Manila, P. I.	New York, N. Y.	General.	2,584	7,955	5,681
George.	25	3.30	25	6.50	25	21.35	Norwegian.	Fred Olsen & Co.	425.5	55.3	27.0	Vancouver, B. C.	London, England.	Wheat, general.	8,268	7,553	5,673
Washington.	25	3.30	25	6.50	25	21.35	Norwegian.	Fred Olsen & Co.	425.5	55.3	27.0	Vancouver, B. C.	London, England.	Wheat, general.	8,268	7,553	5,673
Rangitane.	25	6.00	25	13.18	25	20.00	British.	N. Z. Shipping Co.	552.0	70.2	30.0	Wellington, N. Z.	Frozen, general.	7,314	18,205	13,494	
Samuel.	25	12.20	25	13.30	25	20.35	Norwegian.	Knutson Line.	390.8	54.7	25.0	Vancouver, B. C.	Hamburg, Germany.	General.	6,958	6,822	5,001
Bakke.	25	14.45	25	15.30	25	22.50	Norwegian.	Fearnley & Eger.	381.4	53.8	25.0	Vancouver, B. C.	New York, N. Y.	Lumber.	6,500	6,290	4,530
Fernmoor.	25	22.30	26	6.35	26	14.55	American.	Ridgfield Oil Co., N. Y.	340.0	49.0	24.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	5,900	4,613	2,996
Pueblo.	25	22.30	26	6.35	26	14.55	American.	Ridgfield Oil Co., N. Y.	340.0	49.0	24.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	5,900	4,613	2,996
Bratt.	26	8.50	26	9.35	26	6.15	Dutch.	Royal Ned. S. S. Co.	202.9	33.1	13.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, cacao.	499	1,182	742
Robin Gray.	26	12.15	26	13.11	26	21.00	American.	Island S. S. Lines.	440.0	55.0	25.4	Seattle, Wash.	Baltimore, Md.	(14)	7,778	7,472	5,542
Henry D.	26	13.15	26	13.55	26	22.00	American.	A. C. Dutton Corp.	355.0	51.6	26.0	Everett, Wash.	Lumber.	5,500	5,367	2,900	
Whiton.	26	13.15	26	13.55	26	22.00	American.	A. C. Dutton Corp.	355.0	51.6	26.0	Everett, Wash.	Lumber.	5,500	5,367	2,900	
Portland.	26	15.00	26	16.07	26	23.30	German.	Hamburg-Amerikan. Line.	462.2	61.2	26.2	Vancouver, B. C.	Hamburg, Germany.	(16)	8,212	9,139	6,666
Cerigo.	26	17.00	26	18.26	27	11.10	German.	Hamburg-Amerikan. Line.	227.2	34.4	14.0	Guayaquil, Ecuador.	Cristobal, C. Z.	Nitrates, general.	7,331	1,572	1,011
Ludwigslaten.	1	17.30	27	6.11	27	13.30	German.	North German Lloyd.	393.4	54.3	28.0	Talcahuano, Chile.	Hamburg, Germany.	Nitrates, general.	7,608	6,600	4,622
Agaworld.	26	17.00	27	6.44	27	14.45	American.	Ridgfield Oil Co., Calif.	429.0	54.2	26.2	Los Angeles, Calif.	New York, N. Y.	Gasoline.	10,125	7,720	5,815
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
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General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00	British.	Reardon-Smith Line.	386.7	52.6	25.1	Portland, Ore.	General.	6,094	5,466	3,641	
General Smuts.	26	18.00	27	7.11	27	16.00											

16 Cocoa, rice, coffee and hides.

17 Lumber, and general.

18 Lumber, gasoline, and general.

19 For orders.

20 Launch.

21 Motor ship.

22 General and coconut oil.

23 Tanker.

Kansas.....	26	23	30	27	7	58	27	17	05	27	17	05	American.....	Amer-Hawaiian Line.....	404	6	53	9	26	0	Seattle, Wash.....	Boston, Mass.....	6,896	6,779	4,921
Orbita.....	27	2	05	27	8	14	27	18	50	27	23	05	British.....	Pacific Steam Nav. Co.....	550	3	67	3	29	2	Talcahuano, Chile.....	Liverpool, England.....	5,543	16,844	11,731
Acuña.....	27	9	10	27	10	13	27	18	50	27	23	05	British.....	Pacific Steam Nav. Co.....	550	3	67	3	29	2	Champerico, Guat.....	Cristobal, C. Z.....	537	1,273	706
Gauca *.....	27	11	09	27	11	13	27	19	10	27	22	45	Colombian.....	National Navigation Co.....	107	0	22	9	10	0	Buenaventura, Col.....	Cristobal, C. Z.....	137	202	161
San Marcos.....	27	11	19	27	14	43	27	22	45	27	22	45	American.....	Q. W. Meissner.....	410	0	54	0	26	0	Portland, Oreg.....	Philadelphia, Pa.....	6,642	6,755	4,895
Simba *.....	27	27	27	27	27	27	27	27	27	27	27	27	American.....	C. W. Meissner.....	21	0	7	0	0	0	Miraflores Lake.....	Cristobal, C. Z.....	2	2	2

* Coffee, hides, wood, and boulders.

* Coffee, machinery, and gold.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessels.	Line.	From—	Date.	Vessel.	Line.	For—
December 21.....	Colombia.....	Royal Netherlands S. S. Co.	Amsterdam via waypts.	December 21.....	Cordoba C-40 ¹⁹	Scadta Airplane Co.	Barranquilla and waypts.
December 21.....	Ulua.....	United Fruit Co.	Port Limon, Costa Rica.	December 21.....	Bridgetown.....	Colombian S. S. Line.	New York via wayports.
December 22.....	William.....	Lykes Brothers.	Mobile, Ala.	December 21.....	No. 669-M ¹⁹	Pan American Airways.	Miami via wayports.
December 22.....	Darien C-35 ¹⁹	Scadta Airplane Co.	Barranquilla and waypts.	December 21.....	No. 9685 ¹⁹	Pan American Airways.	San Salvador and waypts.
December 22.....	No. 9670 ¹⁹	Pan American Airways.	San Salvador and waypts.	December 21.....	Ulua.....	United Fruit Co.	New York via Habana.
December 22.....	Colmanes.....	United Fruit Co.	New York via Habana.	December 21.....	Cristobal.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
December 23.....	Orinoco.....	Pan American Airways.	Hamburg via wayports.	December 22.....	Colmanes.....	Panama R. S. S. Line.	New York via Haiti.
December 23.....	No. 945-M ¹⁹	United Fruit Co.	Talara via wayports.	December 22.....	William.....	Lykes Brothers.	Colon, Rep. of Panama.
December 24.....	Zacapa.....	United Fruit Co.	New Orleans, La.	December 22.....	Orinoco.....	Hamburg-American Line.	Georgetown.
December 24.....	Manuel Arnus.....	Spanish S. S. Line.	Barcelona via wayports.	December 24.....	Colmanes.....	Pan American Airways.	Port Limon, Costa Rica.
December 24.....	Flandre.....	French Line.	Barcelona via wayports.	December 24.....	Colmanes.....	United Fruit Co.	San Salvador and waypts.
December 24.....	No. 9685 ¹⁹	Pan American Airways.	San Salvador and waypts.	December 25.....	No. 145-M ¹⁹	Pan American Airways.	Port Limon, Costa Rica.
December 24.....	No. 9685-M ¹⁹	Colombian S. S. Line.	Miami via wayports.	December 25.....	Zacapa.....	United Fruit Co.	Venezuela and wayports.
December 25.....	Reliance.....	Ramburg-American Line.	New York via wayports.	December 25.....	Manuel Arnus.....	Spanish S. S. Line.	Barcelona via wayports.
December 25.....	Alauda.....	Scadta Airplane Co.	New Orleans and waypts.	December 25.....	Triona.....	United Fruit Co.	Port Limon, Costa Rica.
December 26.....	Republic.....	United States Line.	New York via wayports.	December 25.....	Flandre.....	French Line.	Havre via wayports.
December 27.....	Kingsholm.....	Swedish-Swedish Line.	New York via wayports.	December 26.....	No. 9670 ¹⁹	Pan American Airways.	San Salvador and waypts.
December 27.....	Triona.....	United Fruit Co.	Port Limon, Costa Rica.	December 26.....	Darien C-35 ¹⁹	Scadta Airplane Co.	Barranquilla and waypts.
December 27.....	Colombia.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	December 26.....	Reliance.....	Hamburg-American Line.	Port Limon, Costa Rica.
December 27.....	Orinoco.....	Pan American Airways.	Venezuela and wayports.	December 27.....	Triona.....	United Fruit Co.	New Orleans and waypts.
December 27.....	No. 145-M ¹⁹	Pan American Airways.	Talara via wayports.	December 27.....	Kingsholm.....	Swedish-Swedish Line.	New York via wayports.
December 27.....	No. 300-N ¹⁹	Pan American-Grace Airways.	San Salvador and wayports.				
December 27.....	No. 9688 ¹⁹	Pan American Airways.	Miami via wayports.				
December 27.....	No. 889-M ¹⁹	Pan American Airways.	Miami via wayports.				

* Air mail carrier.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 22.....	La Placencia.....	Union Oil Co. of Calif.	Los Angeles, Calif.	December 24.....	La Placencia.....	Union Oil Co. of Calif.	Los Angeles, Calif.
December 26.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.	December 27.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.
December 26.....	Nueva Panama * ²¹	Hans Elliott.	Panama, R. P.	December 27.....	Nueva Panama * ²¹	Hans Elliott.	Panama, R. P.
December 26.....	Libertador * ²²	A. Valdez.	Panama, R. P.	December 26.....	Libertador * ²²	A. Valdez.	Panama, R. P.
December 26.....	Sambu * ²³	Hans Elliott.	Panama, R. P.	December 26.....	Sambu * ²³	Hans Elliott.	Panama, R. P.
December 26.....	Real * ²⁴	Hans Elliott.	Panama, R. P.	December 26.....	Real * ²⁴	Hans Elliott.	Panama, R. P.
December 26.....	Clamartina * ²⁵	A. Valdez.	Panama, R. P.	December 26.....	Clamartina * ²⁵	A. Valdez.	Panama, R. P.

* Motor ship.

* Motor boat.

* Motor boat and barge.

* Other than ships passing through the Canal.

Supplement No. 4.—Departmental Tariff "G".

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., December 22, 1930.

ITEM 1.—MOTOR VEHICLES, TRACTORS AND TRAILERS.

(Effective January 1, 1931.)

Par. 1.—Add:

Assignment of unserviced* cars or trucks without chauffeurs:

Special assignment in outlying districts of unserviced Ford truck
or equivalent may be made with the approval of the Chief Quarter-
master. per month. . . \$20.00

Minimum charge to be for one month.

*NOTE.—The cost of gasoline, oil and repairs will be borne by the division
operating the truck. All repairs are to be performed by the Motor
Transportation Division. The equipment must be returned in as good
condition as received, except for normal depreciation.

ITEM 27.—ELECTRIC CURRENT.

(Effective December 1, 1930.)

Par. 7.—Add:

(d) Electric refrigerators, not exceeding 10 cu. ft., each, per month. . . . \$1.50
(Special rates on larger sizes.)

J. L. SCHLEY,
Acting Governor, The Panama Canal.
2d Vice President, Panama Railroad Co.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending December 27, 1930.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		December 21.		715
Durazzo	Hamburg-American Line		December 21.		227
Cauca	National Navigation Co.		December 21.		318
Bridgetown	United Fruit Co.		December 21.		318
Colombia	Royal Netherlands S. S. Co.	December 21.	December 21.	25	(*)
Ulua	United Fruit Co.	December 21.	December 21.	29	60
Santa Clara	Grace Line	December 21.	December 22.	94	(*)
Colonial	T. & J. Harrison	December 22.	December 22.	276	(*)
William	Aluminium Line	December 22.	December 22.	181	(*)
Delftdijk	Holland-America Line	December 22.	December 22.	(*)	117
Salvador	Pacific Steam Navigation Co.	December 22.	December 27.	477	1,061
Santa Elisa	Grace Line	December 22.	December 23.	121	(*)
Citalina	E. Garcia	December 22.	December 23.	(*)	9
Calamares	United Fruit Co.	December 22.	December 24.	476	23
Orinoco	Hamburg-American Line	December 23.	December 24.	456	(*)
Tai Ping Yang	Barber S. S. Line	December 23.	December 24.	437	(*)
Orazio	Italian Line	December 23.	December 25.	221	(*)
Aconcagua	Chilean Line	December 24.	December 24.	32	(*)
Manuel Arnus	Spanish Line	December 24.	December 25.	108	221
Benekom	Royal Netherlands S. S. Co.	December 24.	December 25.	195	153
Flandre	French Line	December 24.	December 25.	93	437
Iriona	United Fruit Co.	December 24.	December 25.	1,485	(*)
Zacapa	United Fruit Co.	December 24.	December 25.	587	528
Tsuyama Maru	Nippon Yusen Kaisha	December 25.	December 25.	202	(*)
Santa Barbara	Grace Line	December 25.	December 25.	10	25
Bolivar	Colombian S. S. Line	December 25.	December 27.	3	626½
Guayaquil	Panama R. R. S. S. Line	December 25.	December 27.	857	9
George Washington	Fred Olsen Line	December 25.	December 25.	(*)	149
Nevisian	Leyland S. S. Line	December 25.	December 26.	354	(*)
Caldas	National Navigation Co.		December 26.		200
California	Nav. Libera-Triestina	December 26.	December 26.		(*)
Atlantida	Standard Fruit & S. Co.	December 26.		89	
Baralt	Royal Netherlands S. S. Co.	December 26.		497	
Portland	Hamburg-American Line	December 26.	December 27.	54	(*)
Nosa Chief	N. O. & S. A. S. S. Co.	December 27.		176	
Cerigo	Hamburg-American Line	December 27.		364	
Colombia	Royal Netherlands S. S. Co.	December 27.			
Cauca	National Navigation Co.	December 27.		212	
Cid	Pacific Steam Navigation Co.	December 27.		114	
Acacjutla	Pacific Steam Navigation Co.	December 27.		537	
Orbita	Pacific Steam Navigation Co.	December 27.	December 27.	17	33

* No cargo discharged

* No cargo laded

* 1 package.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective December 20, 1930.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulfridon Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulfridon No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulfridon, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Coal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending December 27, 1930.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Chateau Thierry.....	U. S. Army.....	December 10..	December 12..	1,523	470
La Perla.....	United Fruit Co.....	December 12..	December 12..	710	35
President Johnson.....	Dollar Line.....	December 12..	December 12..	1	3
Cambrai.....	U. S. Army.....	December 11..	December 12..	225	42
Nosa King.....	N. O. & S. A. S. S. Co.....	December 14..	December 14..	2	226
Loeado.....	Pacific Steam Navigation Co.....	December 14..	December 14..	51	51
Venezuela.....	Panama Mail S. S. Co.....	December 16..	December 17..	341	30
City of Panama.....	Panama Mail S. S. Co.....	December 16..	December 20..	341	52
El Salvador.....	Panama Mail S. S. Co.....	December 17..	December 18..	84	292
San Jose.....	United Fruit Co.....	December 18..	December 19..	293	30
Benjamin Franklin.....	Fred Olsen & Co.....	December 19..	December 19..	1,551	.....
Santa Teresa.....	Grace Line.....	December 20..	December 20..	52	4
Axel Johnson.....	Johnson Line.....	December 20..	December 20..	134	.....
La Placencia.....	Union Oil Co.....	December 22..	December 24..	286	18
Tai Ping Yang.....	Barber S. S. Line.....	December 22..	December 24..	316	.....
Pennsylvania.....	Panama-Pacific Line.....	December 26..	December 26..	.....	181

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reconsign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reconsigning beyond the Isthmus, cargo billed Cristobal for Orders may be reconsigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 7, 1931. No. 23.

Canal Traffic for Calendar Year 1930.

The total number of commercial vessels transiting the Canal during the calendar year ended December 31, 1930, aggregated 5,885, and the total tolls collection was \$26,146,024.96. The number of transits declined 545, or 8.5 per cent, in comparison with the calendar year 1929, while tolls collections decreased \$1,446,690.88, or 5.2 per cent. The lower percentage of decrease in tolls in comparison with the decrease in number of transits was caused by the greater average tonnage of the vessels transiting in 1930.

The month of the greatest traffic in 1930 was January with 531 transits and \$2,360,211.24 in tolls, while September contributed the lowest with 458 transits and \$2,057,103.58 in tolls. The decrease in Canal traffic is attributed to the existing world-wide adverse business conditions.

The daily average number of commercial transits during the year was 16.12, as compared with 17.62 in the calendar year 1929, and 17.31 for the calendar year 1928. The daily average tolls collection in 1930 amounted to \$71,632.95, as compared with \$75,596.48 in the calendar year 1929 and \$72,065.46 in 1928.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the calendar year 1930, with the daily averages of transits and tolls, with comparative totals for the calendar years 1929, and 1928, and the fiscal year ended June 30, 1930:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
January.....	531	\$2,360,211.24	17.13	\$76,135.84
February.....	491	2,131,386.12	17.54	76,120.93
March.....	515	2,260,002.36	16.61	72,903.30
April.....	489	2,232,763.00	16.30	74,425.43
May.....	479	2,162,898.60	15.45	69,770.92
June.....	478	2,100,994.53	15.93	70,033.15
July.....	488	2,180,511.82	15.74	70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
Total, calendar year, 1930.....	5,885	26,146,024.96	16.12	71,632.95
Total, calendar year, 1929.....	6,430	27,592,715.84	17.62	75,596.48
Total, calendar year, 1928.....	6,334	26,375,962.41	17.31	72,065.46
Total, fiscal year, 1930.....	6,185	27,076,890.01	16.95	74,183.26

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 3, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.	Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.									Day.	Hour.	Nature.	Tons.
Gullmarn ²	18	6.10	28	6.00	28	16.53		Swedish	A. Johansen.	34.0	14.0	5.6	Gothenburg, Sued.	Sydney, Australia.	Ballast.	..	12	12
Barat.	26	17.20	28	6.15	28	13.30	28	14.52	Dutch.	Royal Neth. S. S. Co.	200.0	33.1	11.8	Cristobal, C. Z.	Guayaquil, Ecuador.	General.	361	1,183
Cid.	27	12.10	28	6.00	28	13.28	28	19.07	British.	Pacific Steam Nav. Co.	264.8	41.2	14.0	New York, N. Y.	General.	General.	351	2,746
Calore.	27	19.00	28	6.15	28	14.25	28	15.35	American.	Ore S. S. Corp.	549.0	72.0	23.0	Baltimore, Md.	Cruz Grande, Chile	Ballast.	..	14,533
Tuscaloosa	28	1.25	28	7.20	28	14.34	28	15.35	American.	Isthmian S. S. Lines	424.2	56.2	25.0	Baltimore, Md.	Vancouver, B. C.	Gen., steel, etc.	7,350	7,611
City.	28	3.30	28	7.25	28	15.13	28	16.20	German.	North German Lloyd.	449.0	56.0	18.0	Hamburg, Germany	Vancouver, B. C.	Ballast.	..	7,983
Justin.	28	8.15	28	8.50	28	15.39	28	16.20	Japanese.	Osaka Shosen Kaisha.	446.0	60.5	22.6	Boston, Mass.	Hongkong, China.	General.	3,498	8,942
Saryo Maru ² .	28	8.35	28	8.55	28	17.50	28	17.50	American.	Union Oil Co.	390.0	54.2	18.6	Baltimore, Md.	Los Angeles, Calif.	Ballast.	..	6,205
Manatlat.	28	8.35	28	8.55	28	17.25	28	18.50	British.	Royal Mail S. S. Co.	430.0	61.3	20.0	Rotterdam, Holland.	Seattle, Wash.	Ballast.	..	9,475
Navasota.	28	6.40	28	8.55	28	17.25	28	18.50	American.	Union Oil Co.	390.0	54.2	18.6	Baltimore, Md.	Los Angeles, Calif.	Ballast.	..	6,205
Carago.	27	11.10	28	12.10	28	20.20	28	21.07	German.	Holland-America Line.	227.2	34.4	14.10	Cristobal, C. Z.	Guayaquil, Ecuador.	General.	112	1,572
Dinteldijk ² .	28	00.15	28	12.50	28	21.05	28	22.07	Dutch.	Holland-America Line.	435.0	62.0	19.9	Rotterdam, Holland.	Gen., bananas.	General.	1,398	10,786
Nitokris.	28	00.25	28	13.15	28	23.24	28	23.35	American.	Hamburg Germany	410.9	50.0	24.1	Hamburg, Germany	Valparaiso, Chile.	General.	3,059	6,652
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Brinages *	21	15	20	31	1	8	17	Norwegian.	Westfal, Larsen & Co.	348	0	54	9	26	1	Buenos Aires, Arg.	Vancouver, B. C.	3,957	6,853	5,242	
Atlantic City	31	19	10	31	21	10	16	British.	Reardon Smith Line.	441	7	54	18	6	1	Barry, England.	Vancouver, B. C.	6,355	4,659		
San Francisco	31	20	10	31	6	18	1	British.	Pacific Steam Nav. Co.	485	0	58	0	24	0	Liverpool, England.	Vancouver, B. C.	9,936	6,561		
San Bernardino	31	10	31	6	10	13	14	American.	States S. S. Co.	410	5	59	90	0	0	New York, N. Y.	Valparaiso, Chile.	3,034	3,936		
Empire Star	1	4	25	1	10	13	28	American.	Blue Star Line.	493	0	58	18	0	0	Glasgow, Scotland.	Seattle, Wash.	4,363	6,755	4,873	
Vancouver	1	5	25	1	7	25	1	British.	Imperial Oil Co.	510	2	63	2	94	6	Halifax, N. S.	Vancouver, B. C.	7,744	5,621		
Wind Rush	1	12	03	1	12	10	10	American.	Shepard S. S. Co.	409	0	54	0	17	0	Boston, Mass.	Talara, Peru.	11,573	7,711		
King City	1	14	40	1	14	50	1	British.	Reardon Smith Line.	400	0	53	3	14	0	Barry, England.	Vancouver, B. C.	2,900	6,538	4,753	
Crossington	1	20	55	2	9	31	2	11	Haldin & Phillips, Ltd.	404	0	55	6	14	2	Tyne, England.	Vancouver, B. C.	7,073	5,308		
Court.	31	14	50	2	6	05	2	13	United Fruit Co.	360	0	44	0	0	0	New York, N. Y.	San Francisco, Cal.	3,633	2,373		
Esparia	1	18	00	2	6	05	2	13	Venezuelan.	395	0	55	0	10	6	Maracaibo, Venez.	Balboa, C. Z.	7,106	5,068		
Creole	1	22	45	2	6	20	2	15	French.	445	0	56	0	20	5	Rotterdam, Holl d.	Los Angeles, Calif.	3,565	7,972	5,687	
Monque	2	7	50	2	8	00	2	16	Japanese.	443	5	58	0	31	0	Pittsburgh, Pa.	Kobe, Japan.	5,365	7,972	5,687	
Takotoyo Maru	2	7	50	2	8	00	2	16	Japanese.	443	5	58	0	31	0	Pittsburgh, Pa.	Kobe, Japan.	5,365	7,972	5,687	
Manahan	2	9	30	2	9	45	2	16	American.	Redwood Line.	386	0	52	0	23	3	Houston, Texas.	Seattle, Wash.	5,690	5,696	4,125
Royal Star	2	10	25	2	10	35	2	17	British.	Blue Star Line.	450	9	53	5	21	0	Liverpool, England.	Vancouver, B. C.	8,561	5,815	
Heinrich V.	2	10	45	2	10	55	2	18	Daniz.	519	9	70	0	22	0	Hamburg, Germany.	Talara, Peru.	152	262	161	
Kiedemann *	27	19	10	27	11	05	2	18	Colombian.	107	0	22	0	9	0	Cristobal, C. Z.	Buenaventura, Col.	3,581	3,984	2,628	
Careca *	2	13	15	2	13	25	2	20	American.	Nelson Line.	324	0	46	0	18	0	New York, N. Y.	Seattle, Wash.	3,805	7,145	4,774
Chilepa	1	22	15	1	22	35	2	23	American.	Hamburg-American Line	499	8	59	15	10	0	Valparaiso, Chile.	Valparaiso, Chile.	1,572	7,060	5,025
Clari Legion.	2	19	15	2	20	00	3	9	American.	Tide-water Oil Co.	412	6	54	2	21	6	New York, N. Y.	San Francisco, Cal.	11,819	8,367	
Solana	2	17	40	3	6	10	3	13	British.	Shaw, Savill & Albion.	483	6	26	2	21	6	London, England.	Pr. Chalmers, N. Z.	11,819	8,367	
Zealandic *	2	16	20	3	6	10	3	13	American.	U. S. Navy.	143	3	75	0	22	10	Cristobal, C. Z.	Balboa, C. Z.	30	160	9,855
Sotora *	2	20	35	3	7	15	3	16	American.	International Pet. Co.	565	0	70	0	22	10	New York, N. Y.	Los Angeles, Calif.	16,780	9,855	
C. O. Stulman	3	6	05	3	7	45	3	15	American.	Tampa Turoseum Co.	419	0	60	3	23	0	New Orleans, La.	Mamila, P. I.	5,189	8,696	6,316
Scotsburgh	3	7	10	3	8	25	3	17	British.	N. S. Shipping Co.	480	60	37	0	0	0	Wellington, N. Z.	General.	3,340	11,414	8,468
Ruabine.	1	11	10	1	8	40	3	17	German.	Roland Line.	216	3	32	13	11	0	Guayaquil, Ecuador.	General.	486	1,105	698
West Lynn *	3	9	40	3	9	50	3	17	British.	Oakwin S. S. Co.	401	54	0	13	6	0	Vancouver, B. C.	Ballast.	1,654	8,567	5,161
Missourian *	3	12	20	3	12	40	3	19	American.	Amer.-Hawaland Line	445	59	8	17	7	0	Portland, Oreg.	General.	6,752	6,020	
Acaulda.	27	18	00	3	15	16	3	23	British.	Pacific Steam Nav. Co.	215	7	3	13	7	0	Champerico, Guat.	General.	132	1,273	706
Santa Rita *	2	20	43	3	15	50	4	3	American.	Grace Line.	370	0	53	2	21	10	New York, N. Y.	Valparaiso, Chile.	2,465	6,255	4,099
San Jose	3	15	00	3	15	00	3	15	American.	United Fruit Co.							Gatun, C. Z.	Ballast.			

[illegible]

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Barge.

6 Tug.

For dry-docking.

anker.

• Iron ore, wool, and sheep skins,

For orders.

Tanker:

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.	
Tidewater	30	00	10	30	6	14	30	14	45	American	140.6	66.0	28.5	Los Angeles, Calif.	New York, N. Y.	13,456	9,734	6,349
Canadian	29	21	00	30	6	40	30	15	35	30	20	10	British	Can. Nat. Steamships	Gasoline.	1,340	7,680	5,494
Constructor	29	21	50	30	7	10	30	16	30	16	30	18	British	Fern Line	General.	7,350	6,100	4,240
Pangstad	29	22	10	30	8	05	30	17	00	30	18	20	Norwegian	Royal Mail S. P. Co.	Rice.	2,197	4,906	3,565
Sandstad	30	15	30	30	8	53	30	17	40	30	17	40	British	Royal Mail S. P. Co.	Apples, prunes.	6,060	5,101	3,735
Gisla	30	15	30	30	8	53	30	17	40	30	17	40	Norwegian	Royal Mail S. P. Co.	Sugar.	6,060	5,101	3,735
Cherry Branch	30	6	30	30	8	08	30	18	00	30	19	00	British	Forbes & Moller	Nitrates, general.	6,363	5,403	3,960
Oregonian	30	8	15	30	9	36	30	18	00	30	19	00	American	F. & W. Wilson	Nitrates, general.	6,363	5,403	3,960
Baroness	30	9	05	30	10	08	30	18	00	30	19	00	American	Amer-Hawaiian Line.	General.	6,456	6,734	4,809
Barbara Cates.	30	8	15	30	10	08	30	18	00	30	19	00	British	Shelden & Christenson.	Lumber.	7,452	6,604	4,852
Pacific Star	30	10	40	30	11	19	30	20	15	31	5	45	British	Blue Star Line.	General.	4,567	7,340	5,453
Reliance	30	13	30	14	37	30	22	35	30	22	35	30	British	Furness, Withy & Co.	Manchester, Eng.	8,172	9,644	6,967
Londoner	30	14	30	15	18	30	23	25	31	1	20	Belgium	Can. Maritime Beige.	Hull, England.	General.	6,800	7,068	5,303
Spain	30	15	40	30	16	47	31	11	15	31	12	05	Danish	East Asiatic Co.	Copenhagen, Den.	6,233	7,068	5,303
Silfworth	30	15	40	30	16	47	31	11	15	31	12	05	Danish	East Asiatic Co.	Wheat.	6,233	7,068	5,303
El Lobo	30	23	30	31	6	30	31	13	55	31	14	35	British	R. S. Daiglish, Ltd.	Cardiff, Wales	6,600	6,530	4,623
Lozano	30	23	30	31	6	36	31	13	55	31	14	35	British	Adalgith Refining Co.	Crude oil.	6,104	4,851	3,526
Diana	30	21	31	6	36	31	14	35	31	14	35	14	American	Gulf S. S. Corp.	Philadelphia, Pa.	7,600	6,581	4,795
Do.	31	4	18	31	7	13	31	15	05	31	15	05	American	Calumet S. S. Corp.	Baltimore, Md.	4,076	5,708	4,131
Robert	31	6	00	31	7	55	31	15	55	31	15	55	American	Gulf S. S. Corp.	New Orleans, La.	4,076	5,708	4,131
F. J. Luckenbach.	31	6	45	31	8	45	31	16	30	31	16	30	American	Luckenbach Line.	Boston, Mass.	9,087	8,695	6,375
Luckenbach.	31	6	45	31	8	45	31	16	30	31	16	30	American	Luckenbach Line.	Boston, Mass.	9,087	8,695	6,375
Tokai Maru	31	9	15	31	10	03	31	17	20	31	17	20	Japanese	Osaka Sosen Kaisha.	Mobile, Ala.	3,336	8,508	6,179
Marosdak.	29	14	55	31	11	39	31	18	40	31	18	40	American	Neaka S. S. Co.	Baltimore, Md.	3,866	8,508	6,179
Eastern Sun	31	12	00	31	12	39	31	20	25	31	20	25	American	Sun Oil Co.	Philadelphia, Pa.	3,789	3,984	2,628
Cal.	31	15	45	31	16	51	31	11	10	3	8	40	German	Roland Line.	Gasoline.	13,244	9,607	6,551
Endjick.	31	17	50	31	18	57	31	11	15	1	12	30	Dutch.	Holland-America Line.	Gasoline.	920	1,105	698
Colombia.	31	10	00	1	6	29	1	13	25	2	12	40	American	Panama Mail S. S. Co.	General, wheat.	8,233	8,514	6,066
San Leonardo	1	0	05	1	6	52	1	14	30	1	14	30	British	Anglo-Mexican Oil Co.	General, coffee, general.	3,656	6,015	4,281
Willkeno.	1	8	15	1	9	07	1	16	40	1	16	40	American	Williams S. S. Corp.	New York, N. Y.	7,265	5,962	3,550
Hoyanger	1	11	45	1	12	36	1	20	20	2	20	10	British	Harrison Line.	Lizards, Eng.	9,076	7,750	5,805
Kellerwald.	1	15	00	1	15	54	1	22	30	2	22	30	Norwegian.	Intercean S. S. Corp.	Baltimore, Md.	6,891	6,202	4,725
Mahala.	1	20	0	2	6	56	2	14	10	2	17	55	German	Harrold & Albion.	General.	8,153	6,289	4,723
Siota	1	23	30	2	7	13	2	18	55	3	18	55	British	Shaw, Savill & Albion.	Rotterdam, Holland	8,104	6,110	4,884
Ben.	2	9	05	2	8	45	2	16	20	3	16	20	French	U. S. Navy.	Dunkirk, France	7,981	11,545	7,894
Buenaventura.	2	10	25	2	9	52	2	20	05	3	20	05	American	French Line.	General, frozen.	8,104	6,110	4,884
Beta.	2	12	45	2	13	55	2	22	35	3	22	35	German	Panama R. R. S. Line	Cristobal, C. Z.	7,981	11,545	7,894
	2	14	55	2	15	55	2	24	05	3	24	05	German	Hamburg-American Line	Towing barge.	7,385	6,982	4,834
	2	15	55	2	16	55	2	25	05	3	25	05	German	Hamburg-American Line	General.	2,070	2,873	1,776
	2	16	55	2	17	55	2	26	05	3	26	05	German	Hamburg-American Line	General.	948	3,397	2,337

Cities Service	2	15.55	3	6.17	3	14.05	3	14.05	American.	Richfield Oil Co.	431.0	59.2	27.0	Los Angeles Calif.	Baltimore, Md.	Gasoline	9,655	8,093	5,347
Oklahoma *	2	17.00	3	6.55	3	16.30	3	16.30	Italian.	Societa Unione Genova.	450.0	55.0	28.2	Vancouver B. C.	London, England.	Wheat, lumber.	9,029	8,182	6,097
Fidelitas.	2	20.00	3	8.01	3	16.00	3	16.00	American.	Union Mexican Line.	471.0	57.2	30.0	Everett, Wash.	Boston, Mass.	Lumber, general.	15,820	10,154	6,966
Texas.	3	1.25	3	8.47	3	18.05	3	18.05	American.	Transoceanic.	499.9	68.1	29.0	Los Angeles Calif.	Pt. Arthur, Tex.	Gas oil	9,600	8,553	8,271
California *	3	6.40	3	9.01	3	16.35	3	16.35	British.	Anglo-Mexico Oil Co.	420.1	54.6	16.0	Valparaiso, Chile.	Curacao, D. W. I.	Ballast.	6,636	6,408	
San Jacinto *	3	10.05	3	11.03	3	21.05	3	21.05	American.	Union S. S. Corp.	410.5	54.0	26.0	Tacoma, Wash.	Baltimore, Md.	Lumber, general.	6,926	6,624	4,883
John P.	3	15.50	3	16.53	4	11.15	4	13.00	Norwegian.	Anglo-Saxon Pet. Co.	420.1	58.5	25.0	San Francisco, Cal.	Lands End, Eng. *	Kerosene.	8,590	6,669	4,317
Pedersen *	3	15.00	3	17.21	4	14.05	4	14.05	American.	Bethlehem Steel Corp.	550.3	72.2	34.3	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,515	15,551	4,297
Marore.																			

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 28.	LaFayette.	French Line.	New York via wayports.	December 28.	Bolivar	Colombian S. S. Line.	New York via wayports.
December 28.	Calamates.	United Fruit Co.	Port Limon, Costa Rica.	December 28.	Princeton.	Cunard S. S. Co.	New York via wayports.
December 28.	Statenland.	Holland-America Line.	New York via wayports.	December 28.	Republic.	U. S. Lines.	Habana, Cuba.
December 28.	Tolosa.	United Fruit Co.	New York via Habana.	December 28.	Orinoco.	Royal Netherlands S. S. Co.	Amsterdam and wayports.
December 29.	Darien C-35 ¹ .	Seadta Airplane Co.	Barraquilla and waypts ts.	December 28.	Orinoco.	Hamburg-American Line.	Hamburg via wayports.
December 29.	No. 9670 ¹ .	Pan American Airways.	San Salvador and waypts ts.	December 28.	Atlanta.	United Fruit Co.	New York via Habana.
December 30.	Commodore Rollins.	United Fruit Co.	New Orleans, La.	December 28.	Atlanta.	Standard Fruit & S. S. Co.	New Orleans and waypts ts.
December 30.	No. 945-M ¹ .	Pan American-Grace Airways.	Talara via wayports.	December 28.	Statenland.	Holland-America Line.	New York via Habana.
December 31.	Ancon.	Pan American-Grace Airways.	Avonmouth via wayports.	December 28.	LaFayette.	French Line.	Buenaventura, Colombia.
December 31.	Panama R. S. S. Line.	Elders & Fyffes Line.	New York via Haiti.	December 28.	LaFayette.	Pan American-Grace Airways.	Bocas, Rep. of Panama.
December 31.	Santa Marta.	United Fruit Co.	New York via Kingston.	December 31.	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.
December 31.	United Fruit Co.	United Fruit Co.	New Orleans, La.	December 31.	Cavina.	Elders & Fyffes Line.	Avonmouth via waypts ts.
December 31.	Pan American Airways.	Pan American Airways.	San Salvador via waypts ts.	January 1.	No. 309-N ¹ .	Pan American Airways.	New York via waypts ts.
December 31.	No. 670-M ¹ .	Pan American Airways.	Miami via wayports.	January 1.	Santa Marta.	United Fruit Co.	La Guayra via waypts ts.
December 31.	Sorvangan.	Aluminum Line.	New Orleans, La.	January 1.	Tela.	Aluminum Line.	Paramaribo via waypts ts.
December 31.	Agafia ¹ .	H. W. Post.	Colon, Rep. of Panama.	January 1.	Tela.	United Fruit Co.	Bocas, Rep. of Panama.
January 1.	Echo ¹ .	Standard Fruit & S. S. Co.	Cartagena, Colombia.	January 1.	Darien C-35 ¹ .	Seadta Airplane Co.	Barraquilla via wayports.
January 2.	Cefalu.	Colombian S. S. Line.	Puerto Colombia.	January 2.	No. 9885 ¹ .	Pan American Airways.	San Salvador and waypts ts.
January 3.	Tela.	United Fruit Co.	Bocas, Rep. of Panama.	January 2.	Tela.	Pan American Airways.	New Orleans and waypts ts.
January 3.	No. 309-N ¹ .	Pan American Airways.	La Guayra via wayports.	January 3.	Baracca.	Colombian S. S. Line.	New York via Kingston.
January 3.	No. 945-M ¹ .	Pan American-Grace Airways.	Talara via wayports.	January 3.	Dora K. ¹ .	A. L. Surgeon.	Bluefields, Nicaragua.
January 3.	No. 683-M ¹ .	Pan American Airways.	Miami via wayports.	January 3.	Impec ¹ .	Colon Import & Export Co.	Colon, Rep. of Panama.
January 3.	No. 9670 ¹ .	Pan American Airways.	San Salvador and waypts ts.				

** Air mail carrier. ** Schooner. ** Motor sloop. ** Motor ship. ** Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
December 29.	Supreme *.		Los Angeles, Calif.	December 31.	Real *.	Hans Elliot.	Panama Bay, R. P.
December 30.	Real *.		Panama Bay, R. P.				

* Other than ships passing through the Canal.

Canal Traffic in December, 1930.

During the month of December, 1930, 495 commercial vessels and 9 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,192,583.85, and on the launches \$41.85, or a total tolls collection of \$2,192,625.70.

The daily average number of transits of commercial vessels was 15.97, and the daily average tolls collection \$70,728.51. The average amount of tolls paid by each of the commercial transits was \$4,429.46 as compared with \$4,380.70 for the month of November, 1930, and \$4,423.43 in comparison with December, 1929.

Tanker Traffic Through the Panama Canal in December, 1930.

During the month of December, 1930, 77 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 431,906, on which tolls of \$379,290.62 were paid. Cargo amounted to 418,138 tons, which included 411,438 tons of mineral oils and 6,700 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 20.2 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 18.9 per cent.

Tank vessels comprised 15.6 per cent of the total commercial transits through the Canal during the month; made up 17.5 per cent of the total Panama Canal net tonnage; were the source of 17.3 per cent of the tolls collected; and carried 19.3 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of December, 1930, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for December, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	10	53,007	\$41,235.31	12,860
Danish.....	1	6,054	4,358.88	.....
Norwegian.....	4	20,480	14,745.60	.....
United States.....	24	136,195	99,286.78	2,500
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, October, 1930.....	44	252,093	187,263.13	25,495
Total, December, 1929.....	50	263,852	194,228.44	22,227
<i>Pacific to Atlantic.</i>				
British.....	7	40,090	43,562.50	78,328
Danzig.....	1	6,127	6,585.00	11,236
German.....	1	4,435	4,773.75	8,327
Norwegian.....	4	21,259	22,715.00	41,203
United States.....	25	144,259	142,027.80	263,684
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, October, 1930.....	49	278,943	279,266.88	467,651
Total, December, 1929.....	50	277,367	277,672.15	493,431

*Includes 6,700 tons of coconut oil.

The following tabulation shows the tanker traffic through the Canal during December, 1930, classified according to trade routes:

ATLANTIC TO PACIFIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	23	127,576	\$93,081.10	2,500
United States to South America.....	4	26,032	18,743.04	
Mexico to South America.....	1	4,408	5,048.75	8,349
West Indies to South America.....	1	3,326	3,590.00	4,511
Europe to United States.....	10	54,394	39,163.68	

PACIFIC TO ATLANTIC.

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
United States intercoastal.....	24	140,540	\$137,565.00	256,984
United States to Europe.....	6	30,139	32,113.75	55,699
South America to United States.....	3	17,537	19,132.50	34,919
South America to Canada.....	3	18,108	19,805.00	37,240
South America to Europe.....	1	6,127	6,585.00	11,236
Philippine Islands to United States.....	1	3,719	4,462.80	46,700

*Coconut oil.

Of the traffic passing through the Canal in December, 1930, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for December, 1929:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
December, 1930.....	27	151,619	\$109,165.68	
November, 1930.....	33	181,068	133,889.22	12,576
October, 1930.....	33	192,300	138,456.00	
December, 1929.....	41	225,048	163,604.04	8,574
<i>From Los Angeles.</i>				
December, 1930.....	28	159,849	158,238.75	292,960
November, 1930.....	35	196,698	195,454.10	345,084
October, 1930.....	34	198,336	193,930.29	328,365
December, 1929.....	39	218,565	217,711.25	388,571

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 2, 1931.

No. 822.

Panama Canal, Gatun Lake, spar buoy changed to gas buoy. Spar buoy No. 14, located in Gatun Lake between spar buoy No. 12 and gas buoy No. 16, was changed to gas buoy No. 14, effective December 30, 1930.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 5, 1931.

No. 825.

Panama Canal, Miraflores Lake, spar buoys changed to gas buoys. Spar buoys Nos. 3, 4, 5, and 6, located in Miraflores Lake have been permanently discontinued and gas buoys Nos. 3, 4, 5, and 6 have been established. Buoys Nos. 3 and 5 show fixed white lights, and Nos. 4 and 6 show fixed red lights.

Gas buoys marking center positions between buoys Nos. 3, 4, 5, and 6 have been permanently discontinued.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 5, 1931.

No. 826.

Colombia, Puerto Colombia, gas buoy reported burning. The master of the American S. S. *Baracoa* reports that on the night of December 30, 1930, the red gas buoy about 100 yards, 160° from the wreck in Puerto Colombia harbor was burning.

Light No. 2333, H. O. List of Lights, Vol. 1, 1930. (Reported extinguished in Notice to Mariners No. 685, Balboa Heights, dated April 3, 1930.)

J. L. SCHLEY,
Acting Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 7, 1931.

No. 828.

Panama, West Coast, Morro Puercos Light, characteristic changed. Effective January 5, 1931, the characteristic of Morro Puercos Light was changed from a regular flash of 0.5 second, eclipse 4.5 seconds to a dual installation of two separate lights, flashing white, each with a period of 5.0 seconds; flash 0.5 second, eclipse 4.5 seconds. The lights may flash either simultaneously or successively, hence the period between flashes will likely be irregular.

Approximate position on charts: Latitude 7° 13' 55" N., longitude 80° 26' 15" W.

J. L. SCHLEY,
Acting Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 7, 1931.

No. 829.

Colombia, West Coast, Buenaventura River, information concerning wreck. The following is quoted from Notice to Mariners No. 52, Washington, D. C., dated December 27, 1930:

The master of the American motor ship *City of San Francisco* reports that the wreck of the S. S. *Tritonia*, sunk in Buenaventura Harbor, has been blown up with dynamite and that the area westward of the charted position of the wreck is foul with submerged wreckage. The wreck is marked at night by an oil lantern.

Approximate position: Latitude 3° 52' 30" N., longitude 77° 06' 00" W.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 3, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Atlantida.....	Standard Fruit & S. S. Co.....	.....	December 28.	.....	364
Baralt.....	Royal Netherlands S. S. Co.....	.....	December 28.	.....	37½
Nosa Chief.....	N. O. & S. A. S. S. Co.....	.....	December 28.	.....	300
Cerigo.....	Hamburg-American Line.....	.....	December 28.	.....	169
Colombia.....	Royal Netherlands S. S. Co.....	.....	December 28.	.....	291
Cid.....	Pacific Steam Navigation Co.....	.....	December 28.	.....	16
Ludwigshafen.....	North German Lloyd.....	.....	December 28.	.....	150
Orinoco.....	Hamburg-American Line.....	.....	December 28.	.....	546
Dinteldijk.....	Holland-America Line.....	December 28.	December 28.	19	118
Nitokris.....	Hamburg-American Line.....	December 28.	December 28.	32	87
Calamares.....	United Fruit Co.....	December 28.	December 28.	9	733½
Guatemala.....	Panama Mail S. S. Co.....	December 29.	December 30.	201	575
West Ira.....	McCormick S. S. Line.....	December 29.	December 30.	60	(²)
Pacific Enterprise.....	Furness, Withy & Co.....	December 29.	December 30.	(¹)	316
Tolosa.....	United Fruit Co.....	December 29.	December 31.	309	26
Canadian Constructor.....	Can. Nat. Steamships.....	December 30.	December 30.	50	(²)
Este.....	North German Lloyd.....	December 30.	December 30.	18	114
Commodore Rollins.....	United Fruit Co.....	December 30.	December 31.	1,109	(²)
Tokai Maru.....	Osaka Shosha Kaisha.....	December 31.	December 31.	116	30
Cavina.....	Elders & Fyffes Ltd.....	December 31.	December 31.	3	(²)
San Bernardino.....	States S. S. Line.....	December 31.	December 31.	232	(²)
Orta.....	Pacific Steam Navigation Co.....	December 31.	January 1.....	71	174
Tela.....	United Fruit Co.....	December 31.	January 1.....	1,346	60
Sorvanger.....	Aluminium Line.....	December 31.	January 1.....	929	(²)
Santa Marta.....	United Fruit Co.....	December 31.	January 1.....	371	223
Ancon.....	Panama R. R. S. S. Line.....	December 31.	.....	4,177	.....
Eemdjik.....	Holland-America Line.....	January 1.....	January 1.....	(¹)	168
Colombia.....	Panama Mail S. S. Co.....	January 1.....	January 2.....	1,099	143
Carl Legien.....	Hamburg-American Line.....	January 1.....	January 2.....	398	51
Creole Bueno.....	Venezuela-Gulf Oil Co.....	January 1.....	January 2.....	3,037	(²)
Cali.....	North German Lloyd.....	January 1.....	January 3.....	929	386
Cefalu.....	Standard Fruit & S. S. Co.....	January 2.....	.....	198	.....
Cauca.....	National Navigation Co.....	.....	January 2.....	.....	124
Kellerwald.....	Hamburg-American Line.....	January 2.....	January 2.....	8	(²)
Zenon.....	French Line.....	January 2.....	January 3.....	158	(²)
Buenaventura.....	Panama R. R. S. S. Line.....	January 2.....	January 3.....	620	(²)
Baracoa.....	Colombian S. S. Line.....	January 2.....	January 3.....	241	86
Santa Rita.....	Grace Line.....	January 2.....	January 3.....	219	516
Acajutla.....	Pacific Steam Navigation Co.....	.....	January 3.....	.....	339
Dora K.....	R. Feuillebois.....	January 3.....	January 3.....	(¹)	19
Tela.....	United Fruit Co.....	January 3.....	January 3.....	97	160
Agira.....	North German Lloyd.....	January 3.....	81

¹No cargo discharged.

²No cargo laded.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., January 14, 1931. No. 24.

Comparison of Canal Traffic in December, 1930, with December Traffic in Previous Years.

Commercial traffic through the Canal during the month of December, 1930, was the lowest December traffic since 1926, when 458 vessels were passed through the waterway. In comparison with December, 1929, the traffic during the past month declined 27 transits (5.2 per cent), 75,145 net tons, Panama Canal measurement (2.9 per cent), and 358,050 cargo tons (14.2 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of December each year from 1914 to 1930, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30th following:

Calendar year.	Month of December.			Fiscal year.	Average per month for fiscal year.		
	Commercial transits.	Panama Canal net tonnage.	Tons of cargo.		Commercial transits.	Panama Canal net tonnage.	Tons of cargo.
1914.....	98	341,993	452,779	1915.....	102	361,197	465,567
1915.....	7	8,594	12,218	1916.....	63	199,687	257,843
1916.....	151	467,923	539,847	1917.....	150	483,213	588,213
1917.....	152	482,816	563,192	1918.....	172	547,839	627,669
1918.....	168	533,992	629,961	1919.....	169	510,416	576,385
1919.....	260	927,726	924,479	1920.....	206	712,170	781,208
1920.....	265	1,027,918	1,076,539	1921.....	241	951,323	966,601
1921.....	239	1,017,244	953,053	1922.....	228	951,455	907,075
1922.....	304	1,375,263	1,535,192	1923.....	331	1,550,482	1,630,556
1923.....	306	2,516,491	2,464,634	1924.....	436	2,179,073	2,249,559
1924.....	407	1,989,196	2,265,687	1925.....	389	1,904,596	1,996,570
1925.....	462	2,257,409	2,358,170	1926.....	433	2,064,549	2,169,787
1926.....	458	2,135,002	2,310,270	1927.....	456	2,185,651	2,312,351
1927.....	589	2,616,728	2,573,828	1928.....	538	2,454,886	2,469,226
1928.....	579	2,698,140	2,714,987	1929.....	534	2,468,483	2,555,250
1929.....	522	2,548,771	2,524,934	1930.....	515	2,408,385	2,502,519
1930.....	495	2,473,626	2,166,884	.....	490	2,438,406	2,320,662

* Canal opened August 15, 1914.

* Average for 10½ months.

* Average for calendar year, 1930.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 9, 1931.

No. 830.

Ecuador, La Plata Island light, reexhibited. The Ecuadorian Minister to Panama is the authority for the following information:

La Plata Island light has been reexhibited with the following characteristics: Group flashing white; flash 0.7 second, eclipse 3.0 seconds, flash 0.7 second, eclipse 3.0 seconds, flash 0.7 second, eclipse 17.0 seconds.

Position: Latitude 1° 15' 50" S., longitude 81° 06' 00" W.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, January 10, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.								Nature.	Tons.	
Willaro.....	4	3.40	4	13.32	4	15.00	Williams S. S. Line.....	386.8	52.2	16.0	Baltimore, Md.....	Tacoma, Wash.....	General.....	2,203	5,684
Agra.....	3	18.15	5	14.54	5	15.50	North German Lloyd.....	295.0	46.0	18.0	Hamburg, Germany.....	Champerico, Guat.....	General.....	2,300	3,041
Nordho.....	4	23.55	5	13.38	5	18.10	Inter. Freightling Co.....	385.0	53.6	14.0	Baltimore, Md.....	Antofagasta, Chile.....	General.....	2,152	6,190
Trelawny.....	5	00.50	5	13.34	5	14.35	Foster, Hain & Reid.....	406.0	54.5	15.0	Baltimore, Md.....	Portland, Oreg.....	Ballast.....	6,395	4,512
Belay.....	5	3.25	5	15.04	5	19.20	Christen Smith & Sons.....	319.2	40.4	16.0	Philadelphia, Pa.....	Valparaiso, Chile.....	General.....	1,377	3,085
S-13.....	.....	.....	5	8.25	5	15.39	U. S. Navy.....	231.0	21.10	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....
S-10.....	.....	.....	5	8.30	5	15.53	U. S. Navy.....	231.0	21.10	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....
S-12.....	.....	.....	5	8.30	5	15.53	U. S. Navy.....	231.0	21.10	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....
Granville.....	5	1.05	5	9.45	5	16.43	Klavness Line.....	426.0	58.5	21.0	Antwerp, Belgium.....	Portland, Oreg.....	Sand, steel, gen.....	4,837	8,388
Ruapahu.....	5	21.05	6	14.55	6	16.20	N. Z. Shipping Co.....	457.0	58.0	26.6	London, England.....	Auckland, N. Z.....	General.....	4,760	9,079
Cumberland.....	5	19.35	6	15.55	6	17.03	Federal Steam Nav. Co.....	520.0	64.2	27.6	Newport, England.....	Bluff, N. Z.....	General.....	7,614	12,930
Robin Hood.....	5	21.50	6	16.10	6	18.05	Isthmian S. S. Lines.....	424.8	55.0	24.0	Baltimore, Md.....	Tacoma, Wash.....	General.....	6,280	7,473
Point Arena.....	6	7.10	6	8.35	6	16.48	Swayne & Hoyt.....	324.0	40.2	20.7	Corpus Christi, Tex.....	Seattle, Wash.....	General.....	2,993	3,984
Asheville.....	2-16	20.40	6	9.00	.....	.....	U. S. Navy.....	225.0	41.0	.....	Cristobal, C. Z.....	Gatun Lake, C. Z.....	Ballast.....	.....	.....
Prince Rupert.....	6	1.20	6	17.30	6	19.05	Am. Deutera Transport.....	400.5	54.3	20.6	New York, N. Y.....	Vladivok, U.S.S.R.....	General.....	4,195	6,977
City.....	6	3.55	6	18.48	6	19.55	Sir. W. R. Smith & Sons.....	400.0	54.3	22.8	New York, N. Y.....	Shanghai, China.....	General.....	6,492	6,964
Victoria City.....	6	5.05	6	19.40	6	20.40	Aktieselskabet Vallo.....	420.0	57.0	22.2	New York, N. Y.....	Talara, Peru.....	Ballast.....	7,226	4,413
Trontolite.....	6	10.05	6	21.03	6	22.05	Operafine.....	404.0	53.9	16.10	Boston, Mass.....	Seattle, Wash.....	General.....	1,838	6,756
Montanan.....	6	13.40	6	22.15	6	23.15	Amer-Hawaiian Line.....	448.9	60.2	20.10	Boston, Mass.....	Seattle, Wash.....	General.....	3,400	9,294
Dorothy.....	6	15.05	6	23.25	6	24.25	Lukenbach Line.....	400.0	52.0	17.0	Halifax, N. S.....	Auckland, N. Z.....	General.....	2,930	6,228
Canadian.....	6	15.20	6	23.25	6	24.25	Can. Nat. Steamships.....	400.0	52.0	17.0	Halifax, N. S.....	Auckland, N. Z.....	General.....	2,930	6,228
Transporter.....	6	15.10	6	23.25	6	24.25	Royal Neth. S. S. Co.....	400.0	52.0	17.0	Halifax, N. S.....	Corral, Chile.....	General.....	4,165	7,817
Boskoop.....	6	7.40	7	14.34	7	15.45	Dutch.....	335.0	55.0	25.0	New York, N. Y.....	Haiphong, China.....	General.....	5,849	7,209
Whicita.....	6	16.15	7	13.17	7	14.30	Roosevelt S. S. Co., S. B.....	395.0	54.7	19.0	New York, N. Y.....	Seattle, Wash.....	General.....	3,500	6,138
Pacific Cedar.....	7	3.50	7	14.51	7	15.48	Dunson S. S. Corp.....	399.0	54.7	19.0	New York, N. Y.....	Seattle, Wash.....	General.....	3,500	6,138
Salinas.....	7	7.10	7	20.17	7	21.46	U. S. Navy.....	403.6	60.0	18.0	Guantanamo, Cuba.....	Target material.....	8.....	.....	.....
Comet.....	7	4.25	7	8.55	7	16.36	Standard Oil Co.....	430.5	69.0	20.0	Chester, Pa.....	Los Angeles, Calif.....	Ballast.....	8,306	8,913
Astral.....	7	8.15	7	9.05	7	17.12	Arrow Line.....	439.5	58.0	25.7	Beaumont, Texas.....	Los Angeles, Calif.....	Batching oil.....	1,936	6,579
Dorothy Cahill.....	7	10.25	7	17.35	7	18.50	Arrow Line.....	410.0	54.2	17.4	Baltimore, Md.....	San Francisco, Cal.....	General.....	7,788	7,611
Steel Sealster.....	7	12.18	7	19.55	8	00.58	Isthmian S. S. Lines.....	425.0	56.0	25.7	Philadelphia, Pa.....	Champerico, Guat.....	Ballast.....	1,158	722
Hello.....	7	7.05	7	14.35	7	22.43	Panama Mail S. S. Co.....	214.0	34.0	11.3	Norfolk, Va.....	Batavia, Java.....	Ballast.....	6,390	4,382
San Eduardo.....	7	10.45	7	22.30	8	3.00	Anglo-Mexican Oil Co.....	420.3	54.6	21.0	Ipworth, England.....	Los Angeles, Calif.....	Ballast.....	1,483	7,469
Iowa.....	7	14.40	7	21.58	8	10.01	French Line.....	449.0	53.0	19.0	Antwerp, Belgium.....	Corral, Chile.....	Iron, cement.....	1,812	4,927
Cedar Branch.....	7	13.40	7	23.05	8	9.55	F. & W. Ritson.....	300.5	51.1	19.4	Tyne, England.....	Valparaiso, Chile.....	General.....	5,213	3,597
Wentworth.....	7	23.10	8	1.31	8	12.45	R. S. Daglish, Ltd.....	400.0	52.3	14.0	Havana, Cuba.....	Vancouver, B. C.....	Ballast.....	5,213	4,058
Tai Yang.....	8	3.35	8	13.18	8	14.25	Barber Wilhelmsen Line.....	461.4	60.4	25.0	Philadelphia, Pa.....	Chemulpo, China.....	General.....	5,876	10,009

* Motor ship.

* Submarine.

* Gunboat.

* Steel products and general.

* (s)

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	Port—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Los Angeles *	5	11 45	5	15 25	5	23 45	6	15 20	German	North German Lloyd.	432.2	59.1	25.0	Vancouver, B. C.	Hamburg, Germany	General	7,547	8,454	6,344
Virginia	5	11 40	6	6 18	6	14 30	6	15 20	American	Panama-Pacific Line.	536.4	80.3	29.0	San Francisco, Cal.	New York, N. Y.	General	7,700 95	234	18,170
Lobos	6	4 15	6	6 25	6	17 35	6	17 35	American	United Fruit Co.	549.6	72.2	34.0	Oriz Guadalupe, Chile	Baltimore, Md.	Iron ore	21,500 14	235	4,635
San Mateo.	5	11 00	6	7 28	6	15 55	6	15 55	American	United Fruit Co.	315.2	44.2	19.4	San Francisco, Cal.	Cristobal, C. Z.	General	9,933	3,466	2,141
Oregon *	5	20 50	6	8 05	6	20 45	6	20 45	American	The Texas Co.	425.8	57.0	28.0	Los Angeles, Calif.	Pt. Arthur, Tex.	Gas oil	10,006	7,218	5,184
Nebraska.	6	4 20	6	8 21	6	20 25	7	2 25	British	Royal Mail S. P. Co.	450.0	58.0	24.0	Vancouver, B. C.	Rotterdam, Holland	Nitrate of soda.	5,140	8,578	6,588
Queen Eleanor.	6	6 20	6	8 48	6	21 15	6	22 00	British	DuPont de Nemours.	400.3	52.3	25.0	Coquille, Chile	Jacksonville, Fla.	Nitrate of soda.	7,550	3,808	4,054
Luckenbach.	6	9 35	6	10 23	6	22 00	6	22 00	American	Lockenbach Line.	446.0	56.1	28.0	Los Angeles, Calif.	Boston, Mass.	General	7,163	8,508	6,179
Hawaiian.	6	9 55	6	10 53	6	22 55	6	22 55	American	Amer-Hawian Line.	404.6	53.9	25.0	Portland, Ore.	Boston, Mass.	General	6,546	6,786	4,767
Adala.	6	13 00	6	13 45	6	23 58	7	5 00	German	Kerr, Gifford & Co.	337.5	48.1	20.0	Vancouver, B. C.	Pt. Arthur, Tex.	Wheat	9,780	2,824	3,054
Illinois *	6	11 49	7	6 06	7	14 05	7	14 05	Japanese	The Texas Co.	416.8	56.1	25.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	7,614	5,914	5,032
Karachi Maru.	6	23 10	7	6 44	7	16 15	7	19 35	Japanese	Sugar Central Co.	385.0	51.0	24.2	Honolulu, P. I.	New York, N. Y.	Sugar	7,000	5,914	4,388
Munidos	7	00 30	7	7 24	7	19 15	7	19 15	American	Mason, McCorkle Line.	370.0	53.1	26.0	Seattle, Wash.	New York, N. Y.	Lumber, general	6,000	5,555	4,187
San Simon.	7	2 34	7	7 43	7	21 15	7	21 15	American	Quaker Line.	410.5	54.3	24.4	Portland, Ore.	Philadelphia, Pa.	Lumber, general	6,048	6,573	4,916
Nosa Prince.	7	7 40	7	8 33	7	19 30	7	21 30	American	N. O. & S. A. S. S. Co.	324.0	46.2	22.0	Talcahuano, Chile	New Orleans, La.	Nitrate of soda.	4,040	3,983	2,570
Manizales	7	7 50	7	8 55	7	21 30	7	21 30	German	Roland Line.	216.5	32.9	11.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	327	1,132	741
Hokuroku	7	11 00	7	14 19	7	23 10	8	12 20	Japanese	Oaska Shosen Kaisha.	446.0	60.5	22.0	Hongkong, China.	New York, N. Y.	General	2,725	8,942	6,251
Maru *	7	18 55	7	19 45	8	4 40	8	6 00	Japanese	Chilean Nit'e Prod. As'n	385.0	51.0	27.0	Antofagasta, Chile.	Azores *	Nitrate of soda.	7,748	5,919	4,400
Washington	8	4 45	8	6 51	8	14 45	8	14 45	American	Arrow Line.	409.5	54.2	25.0	Portland, Ore.	New York, N. Y.	Lumber	7,849	6,615	4,966
Christenson.	8	6 59	8	14 50	9	9 30	9	9 30	American	U. S. Army.	98.0	22.0	22.0	Balboa, C. Z.	Cristobal, C. Z.	General	3,222 13	137	9,067
Gen. G. W.	8	6 20	8	7 52	8	19 50	9	4 10	British	Pacific Steam Nav. Co.	825.3	62.8	22.0	Talcahuano, Chile.	Liverpool, England	Towing barge	7,532	6,621	4,916
Oroya	8	6 15	8	8 39	8	20 30	9	9 00	American	U. S. Navy.	155.0	30.0	30.0	Balboa, C. Z.	Cristobal, C. Z.	General	7,532	6,621	4,916
Saoto *	8	6 15	8	9 58	8	21 30	9	21 30	British	Bardon Smith Line.	401.6	54.3	26.0	Vancouver, B. C.	Cardiff, Wales	General	7,550	6,161	4,559
Skeerness	8	11 05	8	12 11	8	22 25	8	22 25	British	Strauss & Co., London.	406.5	54.1	23.0	San Francisco, Cal.	Dublin, Ireland.	Barley	7,550	6,161	4,559
Dalrym	8	11 05	8	12 11	8	22 25	8	22 25	British	Strauss & Co., London.	406.5	54.1	23.0	San Francisco, Cal.	Dublin, Ireland.	Barley	7,550	6,161	4,559
City of	8	11 05	8	12 11	8	22 25	8	22 25	British	Strauss & Co., London.	406.5	54.1	23.0	San Francisco, Cal.	Dublin, Ireland.	Barley	7,550	6,161	4,559
Elwood *	8	11 55	8	12 40	8	23 30	9	13 27	American	Roosevelt S. S. Co.	395.5	55.0	27.0	Shanghai, China.	Baltimore, Md.	Sugar, general.	7,293	7,344	5,283
Indra *	8	10 30	8	14 47	9	00 10	9	00 10	Norwegian	Knut Knutsen.	375.8	51.4	23.0	Corral, Chile.	Oslo, Norway	General	6,283	5,456	3,797
City of San	8	10 30	8	14 47	9	00 10	9	00 10	Norwegian	Knut Knutsen.	375.8	51.4	23.0	Corral, Chile.	Oslo, Norway	General	6,283	5,456	3,797
Francisco *	8	15 27	8	19 25	9	2 10	9	2 10	American	Panama Mail S. S. Co.	296.1	45.9	18.0	San Francisco, Cal.	Cristobal, C. Z.	Gasoline	1,201	3,848	2,606
Lion *	8	12 32	9	0 00	9	15 25	9	15 25	Norwegian	Anglo-Saxon Pet. Co.	451.8	59.2	26.0	Los Angeles, Calif.	Curaçao, D. W. I.	Gasoline	9,889	8,099	5,338
New Jersey *	9	5 30	9	6 39	9	16 10	9	16 10	American	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Houston, Texas	Gasoline	7,250	6,925	4,982
Canadian	9	5 30	9	6 39	9	16 10	9	16 10	American	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Houston, Texas	Gasoline	7,250	6,925	4,982
Commander.	9	2 15	9	7 32	9	17 40	9	19 10	British	Can. Nat. Steamships.	400.0	52.4	21.0	Sydney, Australia.	Halifax, N. S.	General	4,908	5,914	4,195
Tanager *	9	1 00	9	8 32	9	20 00	9	21 05	Norwegian	Westfal, Larsen & Co.	398.1	54.7	24.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	5,344	6,858	5,308

* For orders.

** Tug.

** Junior mine planter.

** Motor ship.

** Tanker.

** Coffee, gasoline, and general.

Ousebridge . . .	9	6.00	9	8.45	9	21.20	9	22.40	British	Strange & Co.	N. Western, B. C.	New York, N. Y.	Lumber, shingles	8,300	6,800	5,115
Newadam . . .	9	8.50	9	8.45	9	21.50	9	21.50	American	Amers-Hawkins Ltd.	Seattle, Wash.	Boston, Mass.	General	8,802	8,829	4,627
Zifella . . .	9	10.15	9	11.15	9	22.55	9	22.55	British	Nitrate Ass'n of Chile	Cochipilli, Bolivia	Moorea, I.	Nitrates	7,400	5,132	3,963
Durazzo . . .	9	11.25	9	12.25	9	23.55	9	23.55	German	Humber-American line	San Augustin, Ecuador	Cristobal, C. Z.		562	1,632	1,041
Play City . . .	9	24.00	9	24.00	9	23.45	9	23.45	American	Nelson Line	San Augustin, Ecuador	London, Conn.	Lumber, general	4,200	3,953	2,631
Alger . . .	9	16.50	9	17.36	10	3.10	10	16.00	German	North German Lloyd	San Augustin, Ecuador	Bremen, Germany	General	7,712	6,452	4,352
Amesmoor . . .	9	18.50	9	19.35	10	5.30	10	15.50	British	Sugar Co., Sydney	Sugar Co., Sydney	London, England	Sugar	7,400	6,055	4,015
Imetukalad . . .	10	1.30	10	6.05	10	15.50	10	15.50	Swedish	Ores S. Corp.	Sugar Co., Sydney	London, England	Iron ore	21,460	13,435	4,496
Santa Inez . . .	9	14.00	10	6.36	10	14.45	10	21.00	American	Grace Line	Valparaiso, Chile	New York, N. Y.	Fruit, (s)	4,275	3,458	4,085
Nagara . . .	9	19.50	10	7.19	10	18.30	10	18.30	British	Royal Mail S. P. Co.	Valparaiso, Chile	New York, N. Y.	Fruit, (s)	4,275	3,458	4,085
Vanolite V . . .	9	23.30	10	7.57	10	19.30	10	19.30	British	Imperial Oil Co., Ltd	Talara, Peru	Halifax, N. S.	Crude oil	15,300	11,573	7,711
Heinrich V . . .	10	6.30	10	8.31	10	20.20	10	20.20	Danish	Baltic-Amer. Pet. Co.	Talara, Peru	Hamburg, Germany	Naphtha	15,200	12,535	8,317
Riedemann . . .	10	10.55	10	11.38	10	21.38	11	19.55	Norwegian	Fred Olsen Line	Vancouver, B. C.	Oslo, Norway	General	7,419	8,005	5,553
Lincoln . . .	10	14.20	10	15.09	10	22.55	11	1.15	British	Can. Nat. Steamships	Vancouver, B. C.	Halifax, N. S.	Lumber, general	5,934	5,992	3,322
Miller . . .	10	14.25	10	15.24	10	23.10	10	1.15	American	Calmar S. S. Corp.	Portland, Ore.	New York, N. Y.	Lumber	7,940	7,381	3,629
Mathew . . .	10	14.30	10	15.44	11	00.55	11	03.55	American	Luckenbach Line	Portland, Ore.	Mobile, Ala.		4,192	7,977	4,702
Luckenbach . . .	10	15.30	10	17.05	11	2.55	11	20.38	Norwegian	Canadian Transp. Co.	Vancouver, B. C.	Beaumont, Tex.	General	6,320	4,944	2,349
Byrnie . . .	10	8.30	10	20.44	11	13.33	13	5.10	British	Standard Transp. Co.	Los Angeles, Calif.	Bristol channel	(s)	7,186		
Tamaha . . .	10	19.55	10	20.55	11	13.50	11	13.50	Danish	Inter-Freighting Corp.	Tocopilla, Chile	Panama I.	Nitrates	8,000	6,991	4,936
Northdave . . .	10	19.55	10	20.55	11	13.50	11	13.50	Danish	Inter-Freighting Corp.	Tocopilla, Chile	Panama I.	Nitrates	8,000	6,991	4,936

* Tanker.

† Coffee, coco, and hides.

‡ Manganese, coffee, and cotton.

§ Wheat, lumber, and general.

|| Hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

PORT OF CRISTOBAL.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 4	Guadeloupe.	French Line.	St. Nazaire via wayports.	January 4	Toba	United Fruit Co.	New York via Habana.
January 4	Tolon.	United Fruit Co.	Port Limon, Costa Rica.	January 4	Cefali.	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 5	Cundinamarca-C-33 ²⁰	Scudfa Airplane Co.	Barranquilla and waypts.	January 4	Ancon.	Panama R. S. S. Line.	New York via Haiti.
January 6	Abangarez.	United Fruit Co.	New York via waypts.	January 6	Cundinamarca-C-33 ²⁰	Scudfa Airplane Co.	Barranquilla and waypts.
January 6	No. 9655 ²⁰	Pan American Airways.	San Salvador and waypts.	January 7	Guadalupe.	French Line.	Havre via wayports.
January 6	Venezuela.	Royal Netherl. S. S. Co.	Hamburg via wayports.	January 7	Daytonian.	Leyland S. S. Line.	Port Limon, Costa Rica.
January 6	Yucatan.	Pan American-Grace Airways.	Liverpool via wayports.	January 7	Abangarez.	United Fruit Co.	Port Limon, Costa Rica.
January 6	No. 309-N ²⁰	Pan American-Grace Airways.	Talara via wayports.	January 8	Irona.	Royal Netherl. S. S. Co.	Port Limon, Costa Rica.
January 7	Metapan.	United Fruit Co.	New York via Kingston.	January 8	No. 915-M ²⁰	United Fruit Co.	LaGuayra via wayports.
January 7	Irona.	United Fruit Co.	New Orleans, La.	January 8	Metapan.	Pan American-Grace Airways.	New York via wayports.
January 7	No. 9570 ²⁰	Pan American Airways.	San Salvador and waypts.	January 8	Gruewald.	Hamburg-American Line.	Cartagena, Colombia.
January 8	Anacurema ²¹ .	United Fruit Co.	Colon, Rep. of Panama.	January 9	Camden.	Scudfa Airplane Co.	Curacao via Almirante.
January 8	Gruewald.	Hamburg-American Line.	Tampico via wayports.	January 9	Cundinamarca-C-33 ²⁰	United Fruit Co.	Barranquilla and waypts.
January 8	Camden.	United Fruit Co.	Curacao, D. W. I.	January 10	Irona.	United Fruit Co.	New Orleans and waypts.
January 8	Cundinamarca-C-33 ²⁰	Scudfa Airplane Co.	Barranquilla and wayports.	January 10	Atlantida.	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 8	No. 303-N ²⁰	Pan American Airways.	Miami via wayports.	January 10	Venezuela.	Royal Netherl. S. S. Co.	Amsterdam and wayports.
January 9	Atlantida.	Standard Fruit & S. S. Co.	New Orleans via Habana.	January 10	Abangarez.	United Fruit Co.	New Orleans and waypts.
January 9	Bogota.	Colombian S. S. Line.	New York via wayports.	January 10	Canal.		

²⁰ Air mail carrier. ²¹ Motor boat.

* ARRIVALS. * DEPARTURES.

* Other than ships passing through the Canal.

* Other than ships passing through the Canal.

20 Air mail carrier.

• Air mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.			
* ARRIVALS.					Date.	Vessel.	Line.	For—
January 10 . . .	Swiftwind . . .			From—	January 10 . . .	Daytonian . . .	Leyland S. S. Line . . .	Liverpool via wayports.
January 10 . . .	Venezuela . . .	Shell-Eastern Petroleum Co. . .	Curacao, D. W. I.	Port Limon, Costa Rica.				
January 10 . . .	Irióna . . .	Royal Netherlands S. S. Co. . .	Port Limon, Costa Rica.	Port Limon, Costa Rica.				
January 10 . . .	Abangarez . . .	United Fruit Co. . .	Port Limon, Costa Rica.	Port Limon, Costa Rica.				
January 10 . . .	Daytonian . . .	Leyland S. S. Line . . .	Port Limon, Costa Rica.	Port Limon, Costa Rica.				
January 10 . . .	Heredia . . .	United Fruit Co. . .	New Orleans, La.	La Guayra via wayports.				
January 10 . . .	No. 145-M ²² . . .	Pan American Airways . . .	Talara via wayports.	Talara via wayports.				
January 10 . . .	No. 9954 ²² . . .	Pan American Airways . . .	Talara via wayports.	Talara via wayports.				
January 10 . . .	No. 945-M ²² . . .	Pan American-Grace Airways . . .	Talara via wayports.	Talara via wayports.				
January 10 . . .	No. 670-M ²² . . .	Pan American Airways . . .	Miami via wayports.	Miami via wayports.				
²² Air mail carrier.					PORT OF BALBOA.			
January 5 . . .	Frost ²³ . . .	West India Oil Co. . .	Talara, Peru.	Talara, Peru.	January 6 . . .	Frost ²³ . . .	West India Oil Co. . .	Punarenas, Costa Rica.
January 9 . . .	Nueva Panama ²³ . . .	Hans Elliot . . .	Panama, R. P.	Panama, R. P.	January 9 . . .	Nueva Panama ²³ . . .	Hans Elliot . . .	Panama, R. P.
January 9 . . .	Liberator ²⁴ . . .	A. Valdez . . .	Panama, R. P.	Panama, R. P.	January 9 . . .	Liberator ²⁴ . . .	A. Valdez . . .	Panama, R. P.
January 9 . . .	Ola Marina ²⁴ . . .	A. Valdez . . .	Panama, R. P.	Panama, R. P.	January 9 . . .	Ola Marina ²⁴ . . .	A. Valdez . . .	Panama, R. P.
January 10 . . .	Ontarolite ²³ . . .	Standard Shipping Co. . .	Los Angeles, Calif.	Los Angeles, Calif.				
²³ Motor ship.					* Other than ships passing through the Canal.			
²⁴ Motor boat.								

Commercial Traffic Through the Panama Canal in December, 1930, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1930, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for December, 1929 and 1928. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	74	394,750	300,132	485,041	300,133	\$340,514.81	171,818
Europe to west coast of Canada:							
British.....	11	58,333	39,208	63,694	39,394	42,622.33	2,995
Danish.....	3	18,981	14,381	23,769	14,884	17,976.25	7,180
Dutch.....	2	13,679	10,642	16,989	10,604	13,302.50	3,923
French.....	2	11,677	6,529	14,048	7,114	8,161.25	3,133
German.....	4	25,502	16,971	27,929	17,272	20,151.16	7,251
Italian.....	2	15,853	12,299	20,008	12,480	15,373.75	2,463
Norwegian.....	1	6,140	5,261	8,518	5,341	6,576.25	6,747
Swedish.....	1	5,661	3,406	5,641	4,320	4,257.50	7,701
United States.....	1	6,020	4,821	7,583	4,826	6,026.25	2,429
Total.....	27	161,846	113,518	188,179	116,235	134,447.24	43,822
East coast of United States to west coast of South America:							
British.....	7	34,448	28,348	50,289	29,034	25,359.37	1,429
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,686
Danish.....	1	4,756	2,747	4,553	2,759	3,433.75	1,911
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States.....	11	45,296	38,898	74,319	34,949	40,065.50	15,773
Total.....	22	98,089	80,912	167,147	79,480	79,570.11	20,799
Europe to west coast of United States:							
British.....	7	36,268	29,361	46,752	29,524	26,112.96	.....
Danish.....	1	6,054	5,058	8,271	5,057	4,358.88	.....
Dutch.....	2	13,767	11,034	17,550	10,709	11,695.52	1,398
German.....	2	10,996	8,602	14,285	8,541	9,174.80	3,498
Japanese.....	1	4,117	3,228	5,155	3,654	2,964.24	.....
Norwegian.....	5	23,740	20,295	33,882	20,101	18,346.85	.....
Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	4,333
United States.....	1	8,619	7,026	11,247	6,954	6,205.68	.....
Total.....	20	110,421	87,385	142,102	89,205	82,335.18	9,229
East coast of United States to Far East:							
British.....	8	43,279	27,926	46,704	27,704	34,907.50	26,340
Japanese.....	7	39,244	31,839	50,459	31,426	39,798.75	27,307
Norwegian.....	1	6,829	8,973	6,687	4,085	4,966.25	2,097
United States.....	3	16,809	12,675	20,316	12,658	15,843.75	22,059
Total.....	19	108,161	76,413	124,166	75,873	95,516.25	77,803
Europe to west coast of South America:							
British.....	5	30,198	24,416	39,989	24,638	30,520.00	15,378
Dutch.....	2	11,786	6,743	11,343	6,628	8,428.75	6,677
French.....	2	9,098	7,534	12,076	7,533	9,417.50	4,443
German.....	4	18,229	13,780	21,896	13,538	17,225.00	9,345
Greek.....	1	4,292	2,720	4,349	2,686	3,090.24	.....
Italian.....	2	15,981	11,277	19,543	12,798	14,096.25	2,843
Norwegian.....	1	3,930	3,137	5,128	3,129	3,921.25	6,105
Spanish.....	1	3,054	2,095	3,518	2,079	2,198.88	.....
Total.....	18	96,568	71,702	117,842	73,029	88,897.87	44,791
Crystobal to west coast of South America:							
Colombian.....	3	446	437	673	441	527.65	807
Dutch.....	2	1,484	588	1,560	646	735.00	107
German.....	5	4,502	2,766	5,467	2,856	3,457.50	969
Total.....	10	6,432	3,791	7,700	3,943	4,720.15	1,883

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to Australasia:							
British.....	7	65,025	45,331	75,260	46,523	\$52,846.68	25,884
Swedish.....	1	6,098	3,302	5,819	4,061	4,127.50	1,050
Total.....	8	71,123	48,633	81,079	50,584	56,974.18	26,934
East coast of United States to Australasia:							
British.....	6	34,159	23,606	37,550	23,524	29,507.50	17,597
United States.....	1	5,172	3,825	6,215	3,857	4,781.25	1,200
Total.....	7	39,331	27,431	43,765	27,381	34,288.75	18,797
East coast of United States to west coast of Canada:							
British.....	2	8,408	6,416	10,286	6,450	6,053.76	.....
Danish.....	1	5,084	2,750	4,732	2,865	3,437.50	.....
United States.....	3	16,343	11,691	18,849	11,681	14,613.75	24,866
Total.....	6	29,815	20,857	33,867	20,996	24,105.01	24,866
East coast of United States to Philippine Islands:							
British.....	2	12,646	7,072	13,341	7,473	8,840.00	5,130
Danish.....	1	2,510	1,938	3,252	1,985	2,422.50	1,933
United States.....	2	12,009	10,211	14,631	10,217	12,763.75	8,326
Total.....	5	27,165	19,221	31,224	19,675	24,026.25	15,389
Around the world:							
British.....	1	18,874	13,130	27,132	15,352	16,412.50	.....
United States.....	2	22,856	18,880	31,120	18,880	23,600.00	6,813
Total.....	3	41,730	32,010	58,252	34,232	40,012.50	6,813
Cristobal to west coast of United States:							
United States.....	3	7,291	5,330	8,947	5,304	5,064.11	124
Cristobal to west coast of Central America:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	1,990
Foreign vessels in ballast— United States inter- coastal:							
British.....	1	3,813	2,677	4,281	2,663	2,754.36	.....
Norwegian.....	1	4,375	2,431	4,000	2,485	3,038.75	.....
Total.....	2	8,188	5,108	8,281	5,148	5,784.11	.....
Canadian intercoastal:							
British.....	2	8,368	6,640	11,222	6,954	8,300.00	7,350
East coast of Canada to Aus- tralasia:							
British.....	2	9,659	7,681	12,548	7,657	9,601.25	6,631
East coast of Canada to Far East:							
Danish.....	1	4,066	3,142	5,177	3,199	3,927.50	4,733
Japanese.....	1	4,658	4,268	5,827	4,228	5,335.00	7,491
Total.....	2	8,724	7,410	11,004	7,427	9,262.50	12,224
East coast of South America to west coast of United States:							
United States.....	2	10,051	7,354	11,525	7,285	9,192.50	8,969
East coast of South America to west coast of Canada:							
Norwegian.....	2	10,533	5,879	9,768	6,004	7,348.75	7,491
East coast of Central America to west coast of South America:							
British.....	1	4,408	4,039	6,430	4,052	5,048.75	8,349
United States.....	1	558	425	1,013	425	401.76	.....
Total.....	2	4,966	4,464	7,443	4,477	5,450.51	8,349
West Indies to west coast of South America:							
British.....	1	3,326	2,872	4,800	2,949	3,590.00	4,511
United States.....	1	875	831	1,819	880	1,038.75	20
Total.....	2	4,201	3,703	6,619	3,829	4,628.75	4,531

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of United States to Hawaii:							
United States.....	1	5,450	3,465	5,687	3,450	\$4,331.25	7,966
East coast of United States to Balboa:							
United States.....	1	675	633	1,198	742	486.00	.....
East coast of United States to west coast of Central America:							
British.....	1	4,419	3,524	5,622	3,547	4,405.00	6,236
East coast of Canada to west coast of United States:							
Norwegian.....	1	4,561	2,923	4,904	2,939	3,653.75	4,628
South American intercoastal: Colombian.....	1	307	302	405	308	368.40	650
East coast of South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,212
Central American intercoastal: Colombian.....	1	124	113	207	109	141.25	206
East coast of Central America to Australasia:							
British.....	1	4,076	3,188	5,041	3,192	3,985.00	6,502
Europe to west coast of Cen- tral America:							
German.....	1	2,337	1,384	2,359	1,354	1,730.00	1,709
Africa to west coast of Canada: British.....	1	4,212	2,996	4,803	2,976	3,032.64	.....
Cristobal to Balboa: Panamanian.....	1	20	15	20	16	14.40	.....
Grand total, December, 1930..	252	1,292,442	960,855	1,610,065	969,586	1,100,610.97	551,712
Grand total, December, 1929..	274	1,356,879	1,012,797	1,666,837	1,018,344	1,165,293.25	843,747
Grand total December, 1928..	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504

PACIFIC TO ATLANTIC.

United States intercoastal: United States.....	79	430,746	323,954	526,159	324,282	\$404,942.50	599,952
West coast of Canada to Europe:							
Belgian.....	2	8,045	7,273	10,173	7,462	9,091.25	13,700
British.....	24	120,930	87,121	140,842	86,986	108,901.25	164,892
Danish.....	2	10,966	9,411	13,550	9,441	11,763.75	13,775
Dutch.....	2	14,332	11,060	17,875	11,184	13,825.00	18,325
French.....	1	7,146	4,020	8,068	4,497	5,025.00	8,768
German.....	4	26,652	17,509	30,001	17,875	21,886.25	34,413
Japanese.....	2	10,402	9,549	14,090	9,375	11,775.10	17,035
Norwegian.....	3	16,528	10,879	17,818	11,042	13,598.75	23,596
United States.....	4	21,853	14,909	24,179	14,897	18,636.25	31,140
Total.....	44	236,854	171,731	276,596	172,762	214,502.60	330,649
West coast of South America to Europe:							
British.....	12	64,846	49,158	81,285	50,041	61,447.50	89,015
Chilean.....	1	2,086	1,233	2,370	1,547	1,541.25	660
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,236
Dutch.....	2	12,119	6,286	11,087	6,661	7,857.50	15,583
French.....	2	9,285	7,932	12,504	7,737	9,915.00	14,546
German.....	6	31,051	22,767	36,784	22,331	28,458.75	46,529
Italian.....	1	4,151	3,603	5,963	3,491	4,503.75	8,324
Norwegian.....	2	10,211	6,590	11,134	6,555	8,237.50	17,627
Spanish.....	1	3,084	2,516	3,830	2,441	3,145.00	5,800
Swedish.....	1	4,078	3,197	5,024	3,831	3,996.25	6,775
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total.....	31	156,233	114,524	188,511	115,691	143,155.00	232,793
West coast of South America to east coast of United States:							
British.....	5	21,055	18,287	32,019	19,198	22,858.75	38,457
Chilean.....	2	10,164	6,652	12,658	7,201	8,315.00	11,273
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	7,903
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	44,288
United States.....	8	33,485	23,202	41,073	23,096	29,002.50	27,209
Total.....	18	78,179	58,361	120,979	61,042	72,951.25	129,130

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to Europe:							
British.....	5	23,596	19,681	30,984	18,972	\$24,575.50	30,870
Danish.....	1	5,341	4,257	6,650	4,247	5,321.25	8,526
French.....	1	5,196	3,349	5,693	3,499	4,186.25	6,977
German.....	2	10,190	7,593	12,448	7,462	9,491.25	15,649
Italian.....	2	10,431	8,098	13,168	8,343	10,122.50	12,019
Japanese.....	1	4,658	4,269	5,827	4,228	5,336.25	7,800
Norwegian.....	3	14,972	12,698	21,202	12,641	15,872.50	28,663
Total.....	15	74,384	59,945	95,972	59,392	74,905.50	110,504
West coast of South America to Cristobal:							
Colombian.....	4	790	788	1,104	806	813.30	565
Dutch.....	2	1,484	588	1,560	646	735.00	1,131
German.....	6	5,200	3,384	6,470	3,472	4,230.00	3,444
Total.....	12	7,474	4,760	9,134	4,924	5,778.30	5,140
West coast of Canada to east coast of United States:							
Danish.....	1	4,751	2,699	4,488	2,738	3,373.75	7,200
Norwegian.....	5	24,555	13,436	22,646	13,478	16,795.00	33,641
United States.....	1	2,643	2,030	3,284	1,997	2,537.50	3,514
Total.....	7	31,949	18,165	30,418	18,213	22,706.25	44,355
Australasia to Europe:							
British.....	6	51,265	35,544	59,308	37,100	44,430.00	37,980
Philippine Islands to east coast of United States:							
Japanese.....	2	11,530	8,817	14,016	8,588	11,021.25	8,064
Norwegian.....	1	3,735	2,075	3,549	2,098	2,593.75	6,050
Panamanian.....	1	6,955	3,998	7,044	3,988	4,997.50	2,535
United States.....	1	3,719	3,673	5,187	3,686	4,462.80	6,700
Total.....	5	25,939	18,563	29,796	18,360	23,075.30	23,349
West coast of Central America to Cristobal:							
British.....	4	3,734	3,206	6,001	3,369	4,007.50	1,376
Colombian.....	1	124	113	207	109	89.28	.....
Total.....	5	3,858	3,319	6,208	3,478	4,096.78	1,376
Far East to east coast of United States:							
Japanese.....	2	12,325	10,278	16,730	10,092	12,847.50	6,710
United States.....	1	5,901	4,834	7,573	4,826	6,042.50	4,151
Total.....	3	18,426	15,112	24,303	14,918	18,890.00	10,861
Australasia to east coast of United States:							
British.....	1	4,307	3,186	5,047	3,077	3,982.50	7,600
Norwegian.....	1	4,944	2,666	4,562	2,760	3,332.50	7,349
United States.....	1	5,002	4,549	5,867	3,660	5,686.25	7,505
Total.....	3	14,253	10,401	15,476	9,497	13,001.25	22,454
West coast of United States to Cristobal:							
United States.....	3	7,291	5,330	8,947	5,303	6,662.50	2,308
West coast of South America to east coast of Canada:							
British.....	2	11,821	10,370	18,512	10,163	12,962.50	24,700
Norwegian.....	1	6,287	5,474	8,998	5,217	6,842.50	12,540
Total.....	3	18,108	15,844	27,510	15,380	19,805.00	37,240
Balboa to Cristobal:							
Panamanian.....	1	20	15	20	16	14.40	.....
United States.....	1	950	923	1,768	981	1,140.00	120
Total.....	2	970	938	1,788	997	1,154.40	120
West coast of United States to east coast of Central America:							
Norwegian.....	1	2,080	1,305	2,166	1,298	1,631.25	2,502

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canadian intercoastal:							
British.....	1	2,207	1,239	2,338	1,249	\$1,548.75	3,664
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	3,503
Far East to West Indies:							
Japanese.....	1	5,979	5,121	8,151	5,043	6,401.25	8,534
Norwegian.....	1	4,240	2,446	4,297	2,443	3,057.50	7,380
Total.....	2	10,219	7,567	12,448	7,486	9,458.75	15,914
Australasia to east coast of Canada:							
British.....	1	5,494	4,403	7,178	4,413	5,503.75	1,340
Central American intercoastal:							
Colombian.....	1	124	113	207	109	141.25	38
Grand total, December, 1930..	243	1,181,184	874,024	1,450,326	878,898	1,091,972.88	1,615,172
Grand total, December, 1929..	248	1,191,892	917,138	1,507,121	920,818	1,143,737.63	1,681,187
Grand total, December, 1928..	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483

United States Intercoastal Traffic by Commodities for December, 1930.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the totals for December, 1930, and the totals for December, 1929 and 1928. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	713	15	728
Alfalfa.....		1,298	1,298
Alfalfa meal.....		927	927
Ammunition.....	506		506
Asbestos.....	68		68
Asphalt.....		200	200
Automobiles.....	6,144	73	6,217
Automobile accessories.....	373	19	392
Bamboo.....		50	50
Bark.....	3	456	459
Beans.....	35	9,253	9,288
Borax.....	15	435	450
Bricks.....	106		106
Burlap.....	67	88	155
Calcium carbide.....	194		194
Camphor.....		70	70
Canned:			
Fish.....	231	11,176	11,407
Fruit.....	1,656	24,081	25,737
Meat.....	20	800	820
Milk.....	10	27	37
Soup.....	1,029	136	1,165
Vegetables.....	359	4,952	5,311
Miscellaneous.....	1,863	7,746	9,609
Carbon black.....	119	104	223
Celite filtercel.....		1,075	1,075
Cement.....	129	20	149
Charcoal.....	327		327
Chemicals.....	2,184	1,056	3,240
China and fire clay.....	68	102	170
Coal.....	75		75
Cocoa.....	97		97

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Coconuts.....	29	142	171
Coffee.....	105	210	315
Coke.....	263		263
Cold storage:			
Cheese.....	90		90
Eggs.....		2	2
Fish.....	25		25
Lard.....	83		83
Meat.....		14	14
Other.....	319	125	444
Confectionery.....	517		517
Copra.....		300	300
Cork.....	48		48
Corn.....	75		75
Cotton.....	191	1,842	2,033
Cottonseed meal.....		293	293
Cyanide.....	71	53	124
Drugs.....	969	97	1,066
Earthenware.....	19	2	21
Fertilizer.....	480	18	498
Fish meal.....		93	93
Flour.....	138	7,038	7,176
Fruit:			
Dried.....	8	11,080	11,088
Fresh.....		392	392
Fuller's earth.....	469	152	621
Furniture.....	230	57	287
General.....	41,391	11,152	52,543
Glass and glassware.....	1,178	135	1,313
Glue.....		50	50
Granite.....	101		101
Gum.....		20	20
Hair.....		31	31
Hardwoods.....	1,246	68	1,314
Hats.....		5	5
Hay.....		777	777
Hemp.....	35	488	523
Honey.....		70	70
Hops.....		37	37
Infusorial earth.....		256	256
Ink.....	2		2
Jute.....	157		157
Lard substitute.....	1,637		1,637
Lime.....	80		80
Linoleum.....	635	120	755
Liquors.....	250		250
Lumber.....	1,537	185,922	187,459
Malt.....	101		101
Manufactured goods:			
Iron and steel.....	72,304	823	73,127
Machinery.....	3,235	663	3,898
Railroad material.....	6,551		6,551
Tinplate.....	7,944	5	7,949
Textiles.....	4,562	262	4,824
Miscellaneous.....	6,207	1,729	7,936
Matches.....	212		212
Metals:			
Antimony.....		20	20
Chrome.....	46		46
Copper.....		3,993	3,993
Iron.....	1,451	11	1,462
Lead.....	46	1,431	1,477
Scrap.....	121	197	318
Tin.....	15	40	55
Zinc.....	13	1,031	1,044
Other.....	5		5
Milk, powdered.....	25	545	570
Molasses.....	190		190
Musical instruments.....	12	13	25
Nuts.....		168	168
Oats.....	167	235	402
Oils:			
Cottonseed.....	69		69
Gas oil, fuel oil.....	15	79,156	79,171
Gasoline, benzine, naphtha.....	104	174,149	174,253
Kerosene.....	100	2,285	2,385
Lubricating and greases.....	4,665	1,746	6,411
Olive.....		30	30
Vegetable.....	168	109	277
Whale.....		700	700
Wood.....	24		24
Ores:			
Chrome.....	162		162
Lead.....	346		346
Magnesite.....		1,108	1,108
Manganese.....	1,200		1,200
Zinc.....		519	519
Other.....		190	190

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Totals.
Paint.....	353	36	389
Paper.....	3,353	8,709	12,062
Paper pulp.....		13,147	13,147
Peanuts.....	389		389
Phosphates.....	285		285
Porcelain.....	127	190	317
Rags.....		211	211
Rice.....	1,535	527	2,062
Rope.....	188	160	348
Rosin.....	1,113		1,113
Rubber, manufactured.....	963	91	1,054
Salt.....	100		100
Seeds:			
Canary.....		44	44
Cotton.....		64	64
Grass.....		14	14
Hemp.....		60	60
Other.....	4	299	303
Shells.....	808	37	845
Silk.....		1,373	1,373
Silversand.....		85	85
Skins and hides.....		1,860	1,860
Slag.....	516		516
Slate.....	297		297
Soap.....	2,096	80	2,176
Soda.....	265		265
Soda ash.....	570		570
Soda, bicarbonate.....	142		142
Soda, caustic.....	148		148
Starch.....	115		115
Sugar.....	38	5,659	5,697
Sulphur.....	10,224		10,224
Syrup.....	65		65
Talc.....	20	50	70
Tallow.....		439	439
Tar.....	74		74
Tea.....	25	45	70
Tobacco.....	1,209	33	1,242
Toys.....	3	5	8
Turpentine.....	106		106
Vegetables.....	9	281	290
Waste.....		193	193
Wax.....	165	60	225
Wheat.....		162	162
Wine.....		97	97
Wool.....		1,031	1,031
Total, December, 1930.....	204,134	591,400	795,534
Total, December, 1929.....	255,777	602,357	858,134
Total, December, 1928.....	255,565	508,529	764,094

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending January 10, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Tsuyama Maru.....	Nippon Yusen Kaisha.....	December 24..	December 25..	201	.....
Santa Barbara.....	Grace Line.....	December 25..	December 25..	114	.....
Saramacca.....	United Fruit Co.....	December 26..	December 27..	398	85
Acajutla.....	Pacific Steam Navigation Co.....	December 27..	December 27..	6	.....
Tongking.....	East Asiatic Co.....	December 29..	December 30..	33	.....
Guatemala.....	Panama Mail S. S. Co.....	December 30..	December 30..	36	42
Colombia.....	Panama Mail S. S. Co.....	December 31..	January 1..	7	.....
Esparta.....	United Fruit Co.....	January 2..	January 2..	.....	40
Cauca.....	National Navigation Co.....	January 3..	January 3..	27	.....
Santa Rita.....	Grace Line.....	January 3..	January 3..	68	.....
Frost.....	West India Oil Co.....	January 5..	January 7..	225	47
San Mateo.....	United Fruit Co.....	January 5..	January 6..	80	.....
Santa Maria.....	Grace Line.....	January 5..	January 5..	19	.....
Hokuroku Maru.....	Osaka Shosen Kaisha.....	January 7..	January 7..	74	.....
Salinas.....	U. S. Government.....	January 7..	.....	9	.....
Santa Clara.....	Grace Line.....	January 8..	January 8..	89	.....
Plow City.....	Nelson Line.....	January 8..	January 9..	40	.....
Bokuyo Maru.....	Nippon Yusen Kaisha.....	January 8..	January 8..	15	.....
City of San Francisco.....	Panama Mail S. S. Co.....	January 8..	January 8..	29	.....
Santa Inez.....	Grace Line.....	January 9..	January 10..	1	1
California.....	Panama-Pacific Line.....	January 9..	January 9..	.....	153
Ontariolite.....	Standard Shipping Co.....	January 10..	January 11..	12,003	.....
Tamaha.....	Standard Transportation Co.....	January 10..	January 11..	9,226	.....

Handling and Transporting Explosives.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., January 3, 1931.

CIRCULAR No. 730-2.

Sub-paragraphs (i) and (j), paragraph 9, of Circular No. 730-1, dated September 29, 1930, are amended to read as follows:

(i) Vehicles transporting explosives of Class I or Class II (c) (Fireworks or Pyrotechnics) when in commercial shipments, gasoline in tank trucks, or gasoline in excess of 50 gallons in containers, will not be transported on the Panama Canal ferries on the passenger-carrying trips of these craft. The regular trip leaving the East side of the Canal at 8.30 a. m. is hereby designated for carrying vehicles transporting prohibited explosives or gasoline, as herein described, if presented for transfer across the Canal at that time. Gasoline containers shall be either standard substantial gasoline drums with screw bungs or metal cans with screw tops. All such containers shall be free from leaks and shall not be completely filled. At least 2 per cent of total capacity shall be left vacant in order to avoid leakage or distortion of containers due to expansion of contents from increase in temperature.

(j) Explosives for military purposes, which are not permitted under the regulations to be carried by Panama Canal ferries on passenger trips, will be transported for the Army or the Navy by special arrangement, if the 8.30 a. m. trip does not serve their purpose.

J. L. SCHLEY,
Acting Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 10, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....		January 4.....		525
Cefalu.....	Standard Fruit & S. S. Co.....		January 4.....		324
Tolosa.....	United Fruit Co.....	January 4.....	January 4.....	32	160
Margaret Johnson.....	Johnson S. S. Line.....	January 4.....	January 5.....	(*)	656
Guadeloupe.....	French Line.....	January 4.....	January 7.....	39	214
Champerico.....	Pacific Steam Navigation Co.....	January 4.....	January 10.....	32	160
Agira.....	North German Lloyd.....		January 5.....		392
Santa Maria.....	Grace Line.....	January 5.....	January 6.....	239	124
Los Angeles.....	Hamburg-American Line.....	January 5.....	January 6.....	174	56
Caldas.....	National Navigation Co.....	January 5.....	January 9.....	172	223
Daytonian.....	Leyland S. S. Line.....	January 6.....	January 7.....	267	(*)
Venezuela.....	Royal Netherlands S. S. Co.....	January 6.....	January 7.....	49	(*)
Boskoop.....	Royal Netherlands S. S. Co.....	January 6.....	January 7.....	151	236
Abangarez.....	United Fruit Co.....	January 6.....	January 7.....	397	‡
San Mateo.....	United Fruit Co.....	January 6.....	January 9.....	1,113	(*)
Nosa Prince.....	N. O. & S. A. S. S. Co.....	January 7.....	January 7.....	(*)	31
Iowa.....	French Line.....	January 7.....	January 7.....	5	(*)
Metapan.....	United Fruit Co.....	January 7.....	January 8.....	605	28
Hokuroku Maru.....	Osaka Shosen Kaisha.....	January 7.....	January 8.....	51	70
Iriona.....	United Fruit Co.....	January 7.....	January 8.....	815	(*)
Manizales.....	North German Lloyd.....	January 7.....	January 10.....	334	131
Grunewald.....	Hamburg-American Line.....	January 8.....	January 8.....	(*)	167
Pensylvania.....	French Line.....	January 8.....	January 8.....	60	162
City of Elwood.....	Roosevelt S. S. Line.....	January 8.....	January 9.....	394	(*)
Oroya.....	Pacific Steam Navigation Co.....	January 8.....	January 9.....	58	11
Santa Clara.....	Grace Line.....	January 8.....	January 8.....	57	41
Camden.....	United Fruit Co.....	January 8.....	January 9.....	6,924	(*)
President Wilson.....	Dollar Line.....	January 9.....	January 9.....	2	(*)
City of San Francisco.....	Panama Mail S. S. Co.....	January 9.....		1,202	
Bogota.....	Colombian S. S. Line.....	January 9.....		263	
Durazzo.....	Hamburg-American Line.....	January 9.....		562	
Arizona.....	French Line.....	January 9.....	January 9.....	29	205
Atlantida.....	Standard Fruit & S. S. Co.....	January 9.....	January 10.....	633	327
Rialto.....	Nav. Libera-Triestina.....	January 9.....	January 10.....	107	(*)
Daytonian.....	Leyland S. S. Line.....	January 10.....	January 10.....	(*)	130
Venezuela.....	Royal Netherlands S. S. Co.....	January 10.....	January 10.....	(*)	963
Wido.....	North German Lloyd.....	January 10.....		86	
Ansgr.....	North German Lloyd.....	January 10.....	January 10.....	1	357
Iriona.....	United Fruit Co.....	January 10.....	January 10.....	(*)	118
Santa Inez.....	Grace Line.....	January 10.....	January 10.....	170	119
Heredia.....	United Fruit Co.....	January 10.....			
Swiftwind.....	C. D. Mallory & Co.....	January 10.....	January 10.....	11,892	(*)
Abangarez.....	United Fruit Co.....	January 10.....	January 10.....	60	358
Waunta.....	Standard Fruit & S. S. Co.....	January 10.....		416	
Abraham Lincoln.....	Fred Olsen & Co.....	January 10.....		247	
Moerdijk.....	Holland-America Line.....	January 10.....		200	
Lochkatrine.....	Royal Mail S. P. Co.....	January 10.....		18	

* No cargo discharged.

‡ No cargo laded.

‡ 3 cases.

Traffic by Nationality for December, 1930.

The following tabulation shows the commercial traffic through the Canal during the month of December, 1930, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for December, 1929 and 1928:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	69	338,947	280,999	470,575	286,321	\$317,100.60	136,322
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,686
Colombian.....	5	877	852	1,285	858	1,037.30	1,663
Danish.....	8	41,431	30,016	49,754	30,749	35,556.38	15,757
Dutch.....	8	40,716	29,007	47,442	28,587	34,161.77	12,105
French.....	4	20,775	14,063	26,124	14,647	17,578.75	7,576
German.....	16	61,566	43,503	71,936	43,561	51,738.46	22,772
Greek.....	1	4,292	2,720	4,349	2,656	3,090.24	.....
Italian.....	4	31,834	23,576	39,551	25,278	29,470.00	5,306
Japanese.....	10	53,840	43,505	68,708	43,695	53,310.49	38,010
Norwegian.....	12	62,108	43,899	72,887	44,084	47,851.85	27,068
Panamanian.....	1	20	15	20	16	14.40	.....
Spanish.....	1	3,054	2,095	3,518	2,079	2,198.88	.....
Swedish.....	5	25,536	16,975	47,096	20,808	18,281.49	13,084
United States.....	107	552,774	426,197	699,510	422,241	484,929.11	270,363
Total, December, 1930...	252	1,292,442	960,855	1,610,065	969,586	1,100,610.97	551,712
Total, December, 1929...	274	1,356,879	1,012,797	1,666,837	1,018,344	1,165,293.25	843,747
Total, December, 1928...	315	1,463,621	1,108,243	1,797,394	1,102,512	1,261,608.18	867,504

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,045	7,273	10,173	7,462	\$9,091.25	13,700
British.....	61	309,255	232,195	383,514	234,568	290,218.00	399,894
Chilean.....	3	12,250	7,885	15,028	8,748	9,856.25	11,933
Colombian.....	6	1,038	1,014	1,518	1,024	1,043.83	603
Danish.....	5	25,616	19,101	29,241	19,211	23,876.25	42,404
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,236
Dutch.....	6	27,935	17,934	30,522	18,491	22,417.50	35,339
French.....	4	21,627	15,301	26,265	15,783	19,126.25	30,291
German.....	18	73,093	51,253	85,703	51,143	64,066.25	100,040
Italian.....	3	14,582	11,701	19,136	11,834	14,626.25	20,343
Japanese.....	8	45,094	38,034	58,814	37,326	47,381.35	48,143
Norwegian.....	19	92,683	60,475	101,256	60,536	75,593.75	142,851
Panamanian.....	2	6,975	4,013	7,064	4,004	5,011.90	2,535
Spanish.....	1	3,084	2,516	3,830	2,441	3,145.00	5,800
Swedish.....	3	12,995	10,683	35,700	12,593	13,353.75	51,063
United States.....	99	511,590	383,404	624,037	382,728	479,112.80	682,599
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total, December, 1930...	243	1,181,184	874,024	1,450,326	878,898	1,091,972.88	1,615,172
Total, December, 1929...	248	1,191,892	917,138	1,507,121	920,818	1,143,737.63	1,681,187
Total, December, 1928...	264	1,234,519	947,405	1,562,337	954,421	1,181,421.21	1,847,483

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,045	7,273	10,173	7,462	\$9,091.25	13,700
British.....	130	698,202	513,194	854,089	520,889	607,318.60	536,216
Chilean.....	4	16,922	11,318	22,338	12,724	14,147.50	13,619
Colombian.....	11	1,915	1,866	2,803	1,882	2,081.13	2,266
Danish.....	13	67,047	49,117	78,995	49,960	59,432.63	58,161

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Danzig.....	1	6,127	5,268	8,939	5,007	\$6,585.00	11,236
Dutch.....	14	68,651	46,941	77,964	47,078	56,579.27	47,444
French.....	8	42,402	29,364	52,389	30,430	36,705.00	37,867
German.....	34	134,659	94,756	157,639	94,704	115,804.71	122,812
Greek.....	1	4,292	2,720	4,349	2,686	3,090.24	.....
Italian.....	7	46,416	35,277	58,687	37,112	44,096.25	25,649
Japanese.....	18	98,934	81,539	127,522	81,021	100,691.84	86,153
Norwegian.....	31	154,791	104,374	174,143	104,620	123,445.60	169,919
Panamanian.....	3	6,995	4,028	7,084	4,020	5,026.30	2,535
Spanish.....	2	6,138	4,611	7,348	4,520	5,343.88	5,800
Swedish.....	8	38,531	27,658	82,796	33,401	31,635.24	64,147
United States.....	206	1,064,364	809,601	1,323,547	804,969	964,041.91	952,962
Yugoslav.....	2	9,195	5,974	9,586	5,999	7,467.50	16,398
Total, December, 1930. .	495	2,473,626	1,834,879	3,060,391	1,848,484	2,192,583.85	2,166,884
Total, December, 1929. .	522	2,548,771	1,929,935	3,173,958	1,939,162	2,309,030.88	2,524,934
Total, December, 1928. .	579	2,698,140	2,055,648	3,359,731	2,056,933	2,443,029.39	2,714,987

New Office Building for Panama Agencies Company.

Work was recently started at Old Cristobal on the erection of a new office building to house the offices of the Panama Agencies, a subsidiary of W. R. Grace & Company, operators of several steamship lines through the Panama Canal. The new building, which will be 100 feet by 68 feet, is to be of concrete construction, two stories in height, and will follow the same general architectural lines of other steamship buildings in the immediate vicinity. The new building is to be erected on the sites formerly occupied by the police station and post office, which were removed to the new Canal administration building on completion of that structure last year.

For many years W. R. Grace & Company have controlled vast interests on the west coast of South America, and they have contributed to Canal traffic regularly since the opening of the waterway. The present services of the Grace Line through the Canal consist of a weekly freight and passenger service between New York and west coast Colombian, Ecuadorian, Peruvian, and Chilean ports; a freight service (every 16 days) between New Orleans and the principal ports of South America (Nosa Line); and two services of a subsidiary, the Panama Mail Steamship Line; viz., a fortnightly intercoastal service between New York and San Francisco with calls at Habana, Puerto Colombia, Cartagena, Cristobal, Balboa, west coast Central American ports, Mazatlan, and Los Angeles; and a second west coast service between Cristobal, Canal Zone, and San Francisco with calls at Central American and Mexican west coast ports, and Los Angeles, every 22 days. In addition to its steamship interests, W. R. Grace & Company are heavily interested in the Pan American-Grace Airways, Inc., operating between Cristobal and points in South America.

The Panama Agencies Company also represents other steamship interests on the Isthmus, prominent among which are the Dollar Steamship Line, American-Hawaiian Steamship Line, Arrow Oil Co., Charles Nelson Company, Johnson Line, Nippon Yusen Kaisha, and the Roosevelt Line.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Volume XXIV. Balboa Heights, C. Z., January 21, 1931. No. 25.

Cargo Through the Canal During December, 1930.

On pages 352 and 353 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in December, 1930. This cargo, segregated according to direction as compared with December, 1929, and the differences, is shown in the following tabulation:

	December, 1929.	December, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	843,747	551,712	-292,035
Pacific to Atlantic.....	1,631,187	1,615,172	-66,015
Total.....	2,524,934	2,166,884	-358,050

It will be noted from the above that the Atlantic to Pacific tonnage decreased 292,035 tons (34.6 per cent) as compared with December, 1929, and that from the Pacific to the Atlantic decreased 66,015 tons (3.9 per cent), making a total decrease of cargo tonnage in both directions of 358,050 tons (14.2 per cent). As has been true for the past several months the general decline in the Pacific-bound tonnage has been occasioned by a general curtailment in practically all commodities normally routed in this direction. Last month's tonnage in this direction was the lowest since August, 1924, when 531,703 tons were passed through. As stated above, tonnage in the opposite direction showed comparatively little decrease in comparison with December, 1929, owing to heavier shipments in a great number of food products and nitrates.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-three and nine-tenths (63.9) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 21.7 per cent in Europe. Tonnage from the United States decreased 181,180 tons (34 per cent) in comparison with December, 1929, and that from Europe declined 113,187 tons (48.5 per cent). The proportion of the total tonnage coming from the United States was approximately the same as in December, 1929, while the proportionate amount coming from Europe was lower in December, 1930.

Destination.—Forty-seven and two-tenths (47.2) per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.1 per cent to Asia; 13.1 per cent to South America; and 12.0 per cent to Australasia. Tonnage to all these areas declined as compared with December, 1929, as follows: To the United States, 90,598 tons (25.8 per cent); to Asia, 84,411 tons (44.5 per cent); to South America, 57,243 tons (44.2 per cent); and to Australasia, 55,033 tons (45.4 per cent). With respect to the relation of the cargo destined to these areas to the total cargo in this direction, that to the United States registered a considerable increase, while that to the other principal areas declined.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.8 per cent came from the United States; 25.1 per cent from South America; 14.8 per cent from Canada; 3.8 per cent from Australasia; and 3.1 per cent from Asia. The amounts coming from Canada, Australasia, and Asia, showed relative as well as actual increases of 82,516 tons (52.5 per cent), 12,167 tons (24.5 per cent) and 12,371 tons (32.8 per cent), respectively, as compared with December, 1929. Cargo tonnage from South America with a decline of 156,414 tons (27.9 per cent) in comparison with December, 1929, showed the heaviest decrease in this direction, which was accounted for principally by the heavy decrease in the shipments of Chilean iron ore which normally makes up a large percentage of the cargo tonnage coming out of South America. A considerable decline was also noted in South America's proportion to the total tonnage in December, 1930. Cargo from the United States showed a decline of 18,597 tons, or a little over one per cent, while its proportion to the total tonnage was a little higher in December, 1930.

Destination.—Segregated according to destination, 50.5 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 44.0 per cent to Europe. Tonnage to Europe increased 79,520 tons (12.6 per cent), in comparison with December, 1929, as did its proportion to the total cargo in this direction. That to the United States decreased in its relation to the total cargo and in actual tonnage of 166,454 tons (16.9 per cent). Increases in the shipment of wheat and fruit was largely responsible for the larger tonnage routed to Europe, while the decline of iron ore and mineral oil shipments accounted for the decline in tonnage to the United States.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for December, 1929, or December, 1930, are listed in the following tabulation, showing differences:

Commodity.	December, 1929.	December, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	11,016	8,555	-2,461
Asphalt.....	14,990	8,070	-6,920
Automobiles.....	16,877	11,528	-5,349
Cement.....	46,658	21,478	-25,180
Coal and coke.....	21,229	8,371	-12,858
Cotton.....	36,679	27,847	-8,832
Manufactured goods:			
Iron and steel.....	169,253	119,053	-50,200
Machinery.....	19,364	13,683	-5,681
Railroad material.....	23,569	8,177	-15,392
Tinplate.....	27,792	15,329	-12,463
Textiles.....	8,160	10,570	+2,410
Miscellaneous.....	13,463	11,673	-1,790
Metals, various *.....	21,001	6,255	-14,746
Oils, mineral.....	52,053	38,098	-13,955
Paper.....	19,713	21,308	+1,595
Patent fuel.....	11,354	.....	-11,354
Phosphates.....	23,670	7,470	-16,200
Sulphur.....	19,945	10,224	-9,721
Tobacco.....	12,764	12,841	+77

* Does not include scrap.

The above 19 commodity groups for December, 1930, comprise 65.3 per cent of the cargo moving from the Atlantic to the Pacific. With the exception of three slight increases, the items above listed showed decreases in comparison with December, 1929.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 98 per cent of the cargo moving from the Pacific to the Atlantic during the month of December, 1930. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1929 are listed below:

Commodity.	December, 1929.	December, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	19,820	17,578	-2,242
Beans.....	8,644	12,832	+4,188
Canned goods (fish, fruit, vegetables, etc.).....	76,169	72,698	-3,471
Coffee.....	8,027	11,101	+3,074
Cold storage (food products) *.....	23,608	24,886	+1,278
Flour.....	12,531	12,809	+278
Fruit, dried.....	22,026	31,612	+9,586
Fruit, fresh.....	16,701	40,761	+24,060
Lumber.....	232,449	280,728	+48,279
Metals, various.....	49,702	34,522	-15,180
Nitrates.....	174,574	197,437	+22,863
Oils, mineral.....	487,277	396,758	-90,519
Ores (principally iron).....	228,456	76,454	-152,002
Pulp.....	7,677	13,291	+5,614
Rice.....	3,739	19,135	+15,396
Sugar.....	72,202	40,995	-31,207
Wheat.....	109,364	196,297	+86,933

* Does not include fresh fruit.

The above 17 commodity groups for December, 1930, comprise 91.6 per cent of the cargo moving from the Pacific to the Atlantic. Eleven of the items showed increases over December, 1929, and 6 decreases. Food products, consisting of wheat, fruits, and rice, registered important increases, as did nitrates, while shipments of ores, mineral oil, metals and sugar declined rather heavily.

(Continued on next page.)

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 16, 1931.

No. 833.

Colombia, west coast, Buenaventura River, information concerning wreck declared erroneous. The Captain of the Port of Buenaventura, Colombia, has advised the Governor of The Panama Canal by letter that the information contained in Notice to Mariners No. 52, Washington, D. C., dated December 27, 1930, and subsequently Notice to Mariners No. 829, Balboa Heights, dated January 7, 1931, relative to the blowing up by dynamite of the wreck of the S. S. *Tritonia* is erroneous and that the wreck has not been molested since the S. S. *Tritonia* blew up and sunk in Buenaventura Harbor on February 28, 1929.

Approximate position of wreck: Latitude 3° 52' 30" N., longitude 77° 06' 00" W.

H. BURGESS, Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending January 17, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
San Mateo.....	United Fruit Co.....	January 10...	January 10...		314
S. A. Perkins.....	James Griffiths & Sons.....	January 12...	January 16...	3,901	
Suriname.....	United Fruit Co.....	January 12...	January 13...	160	
Sveve.....	Anglo-Saxon Petroleum Co.....	January 12...	January 14...	2,030	
Laurits Swenson.....	Fred Olsen & Co.....	January 12...	January 13...	2,386	
El Salvador.....	Panama Mail S. S. Co.....	January 13...	January 14...	18	8
Nosa Queen.....	N. O. & S. A. S. S. Co.....	January 14...	January 14...	24	
Ecuador.....	Panama Mail S. S. Co.....	January 14...	January 15...	25	2
Asuka Maru.....	Nippon Yusen Kaisha.....	January 15...	January 16...	189	
City of San Francisco.	Panama Mail S. S. Co.....	January 15...	January 15...		7

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, December, 1930.—Continued from page 351.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.				ASIA.				Grand total.	Per cent of total cargo.		
	West States.	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Pern.	West coast of South America. ¹	Total, South America.	Australia.	New Zealand.	Australasia. ²	Total, Australasia.	Philippine Islands.	China.	Japan.			Far East. ¹	Total, Asia.
NORTH AMERICA:																								
UNITED STATES—																								
North Atlantic ports.....	159,719	305	8,058	82	6,700	174,864	7,723	705	574	2,539	2,327	13,868	8,119	4,222		12,341	14,446	15,217	13,053	12,034	54,750	255,823	46.4	
South Atlantic ports.....	6,181					6,181										2,008	280	736	1,272	1,296	3,574	11,763	2.1	
Gulf ports.....	38,234	478				38,712	3,229	84	224	258	36	3,831	4,448			4,448	255	5,341	16,007	16,258	37,861	84,582	15.4	
Total, United States.....	204,134	783	8,058	82	6,700	219,757	10,952	789	798	2,797	2,363	17,699	12,970	5,827		18,797	14,951	21,314	30,332	29,588	96,185	352,436	63.9	
CENTRAL AMERICA—																								
East coast of Canada.....	4,628	7,350				11,978							3,070	3,561		6,631			500	7,941		8,441	27,050	4.9
East coast of Central America.....	2,554		154			154							14,851			14,851						15,005	2.7	
Cristobal, C. Z. ²	147	64	3,405			5,659	2,430	1,177	1,200	744	483	6,124				6,124						12,083	2.2	
West Indies.....						211			4,511	20		4,531				4,531						4,742	0.9	
Total, North America.....	211,463	8,197	11,617	82	6,700	238,039	13,382	1,986	6,599	3,561	2,846	28,354	30,891	9,388		40,279	14,951	21,814	38,273	29,588	104,626	411,318	74.6	
EUROPE—																								
British Isles.....	2,314	3,900				6,214	9,114	43	394	1,077	2,888	13,516				25,884						45,614	8.3	
Belgium.....	6,035	2,760	545	52		9,392	4,495	1,378	350	317	35	6,575										15,967	2.9	
Denmark.....	11	55		5		71																71	0.0	
France.....	2,451	4	18			2,473	1,232				14	1,251										3,724	0.7	
Germany.....	9,540	1,271	1,050	53		11,914	1,999	450	689	701	1,545	5,284										17,298	3.1	
Holland.....	1,896	258				2,154	1,945	51	87	95	410	2,388										4,742	0.9	
Italy.....	618	69	544			1,231	639				228	1,266	2,383									3,364	0.6	
Norway and Sweden.....	9,148	586	4,154	134		14,022					10	4,823	4,883									18,965	3.4	
Spain and Portugal.....	378	300				678						28										710	0.1	
Europe.....	1,445	262	681	386		3,161	2,375	512	51	374	3,179	6,491										9,652	1.7	
Total, Europe.....	33,836	9,465	6,379	1,630		51,310	21,803	2,434	1,571	2,816	14,229	42,853		25,884		66,103	14,951	21,814	38,273	29,588	105,340	551,712	100.0	
East coast of South America.....	15,049	3,612	32			18,693		940				940								714		714	20,347	3.7
Grand total.....	280,348	21,274	18,028	1,712	6,700	308,062	35,185	5,340	1,170	6,377	17,075	72,147	891	35,272		105,340	14,951	21,814	38,273	29,588	105,340	551,712	100.0	
Per cent of total cargo:																								
December, 1930.....	47.2	3.8	3.3	0.3	1.2	55.8	6.3	1.0	1.5	1.2	3.1	13.1		5.6	6.4		12.0	2.7	3.9	7.1	5.4	19.1	100.0	
December, 1929.....	41.6	2.6	1.6	0.3	1.7	47.8	6.7	0.6	0.4	2.4	5.2	15.3		4.1	9.5	0.8	14.4	2.1	2.4	13.5	4.3	22.5	100.0	
December, 1928.....	40.1	3.7	3.3	0.5	0.5	48.1	4.6	1.2	0.5	2.4	3.9	12.6		5.8	8.4	0.8	14.8	2.6	4.5	12.9	4.5	24.5	100.0	

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, December, 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand total.	Per cent of total cargo.				
	UNITED STATES.					CENTRAL AMERICA.					WEST INDIES.		BRITISH ISLES.	EUROPE.					EAST COAST OF SOUTH AMERICA.	AFRICA.								
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.¹	Total, North America.	Belgium.	Denmark.	France.	Germany.		Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe.²			Total, Europe.							
NORTH AMERICA:																												
West coast of United States	562,344	6,208,322	848,591	400,841	2,067	2,502	1,805	7,174,602	941,143,722	3,493,172	7,074,319	1,001,032	1,001,032	290	40	704	38,537,245	701,381	264	852,718	52.8							
West coast of Canada	40,841			134			8	1,616	44,532	93,864	1,520,270	126,203	14	2			80,976	192,724	2,434	239,690	14.8							
W coast of Central America							38	3,554	129	3,855							6	2,151	428	6,404	0.4							
Bahia, C. Z.			90				120		210											210								
Total, North America																								119,519,440	576,674	264	1,099,052	68.0
SOUTH AMERICA:																												
Chile	56,073	18,640	13,203	87,916	1,024		50	975	89,965	11,877	7,295	433	2,855	3,267	375	500	116		153,087	179,805	160		269,930	16.7				
Colombian	1,911			1,911			2,511		4,422														4,422	0.3				
Ecuador	7,262			7,262			2,198	12	9,472														9,472	0.6				
Peru	29,873			29,873	240		38	33	67,184	16,951	4,679	252	7,219	3,958	1,680	2,649			11,236	48,624			115,808	7.2				
W coast of South America	19			19			1,038		1,057	2,974	310			41					198	3,523			4,580	0.3				
Total, South America																								164,521,231	952	160	404,212	25.1
AUSTRALASIA:																												
Australia	14,854			14,854					14,854															14,854	0.9			
New Zealand	1,206			1,206	100		34		1,340	30,550									7,430	37,980			39,320	2.4				
Australasia	7,600			7,600					7,600															7,600	0.5			
Total, Australasia																								7,430	37,980		61,774	3.8
ASIA:																												
Philippine Islands	16,088		3,700	19,788					19,788															19,788	1.2			
China	4,744			4,744			920	123	5,787															5,787	0.4			
Japan	4,455	1,019	853	6,327			326		6,653															6,653	0.4			
Far East	1,955			1,955			37	15,914	17,906															17,906	1.1			
Total, Asia																								50,134	3.1			
Grand total																								291,470,710	508,684	264	1,615,172	100.0
Per cent of total cargo:																												
December, 1930	46.4	1.6	2.5	50.5	2.5	0.2	0.8	1.6	55.6	18.7	1.1	0.3	1.1	3.2	0.8	0.5	0.2		18.1	44.0	0.4		100.0					
December, 1929	53.9	2.2	2.4	58.5	1.9	0.5	0.7	0.9	62.0	14.5	1.0	0.3	2.8	1.8	0.8	0.2	1.0	0.1	15.0	37.6	0.4		100.0					
December, 1928	39.4	3.3	4.1	46.8	1.1	0.5	1.6	1.1	51.1	13.5	2.0	0.2	1.5	4.2	3.1	1.6	0.3	1.8	15.4	48.4	0.2	0.3	100.0					

* General cargo not routed so as to allow segregation between definite ports.

¹ Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 17, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.			
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	Gross.	Net.
Wido.....	10	10	20	11	4	10	11	13	15	German.....	North German Lloyd.....	393.5	54.1	21.6	Hamburg, Germany.....	Valparaiso, Chile.....	General.....	3,843	6,585	4,631
Moerdijk.....	10	13	30	11	5	20	11	14	05	Dutch.....	Holland-America Line.....	472.9	60.1	20.3	Rotterdam, Holland.....	Vancouver, B. C.....	General.....	2,740	9,165	7,056
City of Pitsburg.....	11	6	25	11	6	40	11	14	48	British.....	Ellerman & Bucknall.....	465.7	58.6	20.0	Norfolk, Va.....	Brisbane, Australia.....	General.....	2,216	9,660	7,415
Oakworth.....	11	7	25	11	7	40	11	15	40	British.....	Canadian Transp. Co.....	400.0	53.2	18.0	Cornbrook, N. F.....	Tacoma, Wash.....	Paper.....	2,500	5,615	3,755
Lochkatrine.....	10	15	25	11	13	05	11	20	53	British.....	Royal Mail S. P. Co.....	485.0	62.0	22.1	Rotterdam, Holland.....	Portland, Ore.....	General, bananas.....	2,890	10,802	7,595
Alaskan.....	11	14	10	11	14	20	11	21	20	American.....	Am-Hawaiian Line.....	415.0	53.7	14.6	Boston, Mass.....	Portland, Ore.....	General.....	1,610	7,380	5,339
Echo.....	11	20	30	11	20	55	11	20	55	Panamanian.....	H. W. Post.....	.....	.....	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....	7
Royal Arrow.....	11	20	30	12	00	05	12	10	10	American.....	Standard Transp. Co.....	467.6	62.7	27.3	Beaumont, Tex.....	Shanghai, China.....	Kerosene.....	11,926	9,699	6,857
Laurits.....	11	13	50	12	5	25	12	12	27	Norwegian.....	Fred Olsen & Co.....	435.0	56.0	22.0	Oslo, Norway.....	Vancouver, B. C.....	General.....	4,605	7,963	5,837
Buenos Aires.....	12	6	05	12	7	55	12	15	01	Japanese.....	Osaka Shosen Kaisha.....	461.0	62.0	24.0	Buenos Aires, Arg.....	Kobe, Japan.....	General, cotton.....	3,854	10,446	7,631
Maru.....	12	8	15	12	8	25	12	16	28	American.....	Munson, McCork's Line.....	400.7	54.2	19.0	Baltimore, Md.....	Tacoma, Wash.....	General.....	3,718	6,623	4,668
Mummysite.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	American.....	U. S. Navy.....	231.0	21.0	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....	.....
S-14.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	American.....	U. S. Navy.....	231.0	21.0	.....	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....	.....
S-16.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	American.....	Tampa Inter-ocean Co.....	439.6	60.0	21.0	New Orleans, La.....	Manila, P. I.....	Cotton, general.....	5,446	8,987	6,012
Patrick Henry.....	12	9	10	12	9	25	12	17	43	American.....	Norton, Lilly & Co.....	440.0	56.0	24.0	Baltimore, Md.....	Seattle, Wash.....	General.....	5,356	8,310	6,005
Hanley.....	12	9	35	12	9	45	12	18	57	American.....	Norton, Lilly & Co.....	440.0	56.0	24.0	Baltimore, Md.....	Seattle, Wash.....	General.....	5,356	8,310	6,005
Buffalo Bridge.....	12	10	20	12	10	45	12	19	30	American.....	Nelson Line.....	324.0	46.2	16.0	New York, N. Y.....	Tacoma, Wash.....	General.....	1,466	3,985	2,630
Elizabeth.....	12	12	30	12	12	40	12	20	48	American.....	Richfield Oil Co.....	391.9	51.2	20.6	New York, N. Y.....	Los Angeles, Calif.....	Ballast.....	.....	5,410	3,627
Kellogg.....	12	18	00	13	2	35	13	11	16	Swedish.....	Axel Brostrom & Son.....	388.8	52.3	18.0	Cardiff, England.....	Arica, Chile.....	Ballast.....	.....	5,631	3,343
Atland.....	13	4	15	13	6	05	13	13	32	Japanese.....	Nippon Yusen Kaisha.....	445.0	58.0	18.0	Baltimore, Md.....	Kobe, Japan.....	General.....	2,436	8,058	5,743
Uftington.....	13	8	15	13	8	25	13	15	55	British.....	Haldin & Phillips.....	405.6	55.6	14.11	Newcastle, Eng.....	Sydney, Australia.....	Ballast.....	.....	6,746	4,811
Court.....	13	18	50	13	9	10	13	16	46	American.....	Panama Mail S. S. Co.....	360.0	51.6	21.0	New York, N. Y.....	San Francisco, Cal.....	General.....	1,972	5,710	4,011
El Salvador.....	13	4	35	13	11	10	13	18	26	French.....	French Line.....	472.1	59.7	23.0	Havre, France.....	Vancouver, B. C.....	General.....	1,826	10,539	7,513
Winipeg.....	13	20	25	14	1	40	14	9	53	American.....	Am-Hawaiian Line.....	434.3	57.7	17.0	Boston, Mass.....	Seattle, Wash.....	General.....	1,527	7,983	5,912
Georgian.....	13	20	25	14	1	40	14	9	53	American.....	Am-Hawaiian Line.....	434.3	57.7	17.0	Boston, Mass.....	Seattle, Wash.....	General.....	1,527	7,983	5,912
Nesa Queen.....	14	12	40	14	5	00	14	23	06	Swedish.....	Ore S. S. Corp.....	561.0	72.2	23.0	Sparrows Pt., Md.....	Cruz Grande, Chile.....	Ballast.....	15,425	4,421	.....
Svealand.....	14	10	14	5	00	14	14	23	14	American.....	U. S. Navy.....	380.0	64.0	26.11	Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....	.....	.....	.....
Rochester.....	13	15	50	14	6	15	14	15	08	American.....	Lucienbach Line.....	446.0	56.0	20.0	Boston, Mass.....	Seattle, Wash.....	General.....	2,553	8,552	6,236
K. I.....	14	7	00	14	7	40	14	15	23	American.....	Lucienbach Line.....	446.0	56.0	20.0	Boston, Mass.....	Seattle, Wash.....	General.....	2,553	8,552	6,236
Lucienbach.....	14	8	30	14	9	05	14	16	30	American.....	The Texas Co.....	434.8	56.0	23.0	Providence, R. I.....	Los Angeles, Calif.....	Ballast.....	.....	7,425	5,156
Nevada.....	14	3	10	14	9	45	14	17	20	American.....	States S. S. Co.....	410.5	54.3	18.7	Philadelphia, Pa.....	Seattle, Wash.....	General.....	3,291	6,572	4,900
San Vicente.....	14	3	10	14	9	45	14	17	20	American.....	States S. S. Co.....	410.5	54.3	18.7	Philadelphia, Pa.....	Seattle, Wash.....	General.....	3,291	6,572	4,900
Grelstone.....	14	12	40	14	14	10	14	23	06	British.....	Darwin Ship Co.....	379.0	46.1	16.0	Norfolk, Va.....	Anatagasta, Chile.....	Ballast.....	1,879	3,981	3,939
Nesa Queen.....	12	17	25	14	14	30	14	23	06	American.....	N. O. & S. A. S. S. Co.....	324.0	46.2	18.1	New Orleans, La.....	Valparaiso, Chile.....	General.....	1,879	3,981	3,939
Willapa.....	14	14	50	15	1	05	15	11	46	American.....	Am-Hawaiian Line.....	415.0	55.7	18.0	Norfolk, Va.....	Seattle, Wash.....	General.....	1,902	7,731	5,865
Abron.....	14	18	35	15	2	45	15	11	06	American.....	Gulf-Pacific Line.....	381.0	52.2	21.0	Houston, Tex.....	Seattle, Wash.....	General.....	6,059	5,732	4,131
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* Submarine.

* Motor ship.

* Motor ship.

* Tanker.

Pomona	14	23	00	15	4	30	15	12	14	15	13	30	American	Isthmian S. S. Lines...	400.0	56.0	17.0	Baltimore, Md	Everett, Wash.	Ballast.	8,324	6,034
Exik Frisell	14	18	30	15	5	45	15	12	13	16	15	20	Swedish	Grangesberg Co.	382.0	53.0	17.6	Baltimore, Md	Arica, Chile	Ballast.	5,766	4,084
Yamato Maru	14	23	00	15	8	35	15	12	13	15	16	15	Japanese	Kokusai Kisen Kaisha...	425.0	53.0	24.0	New York, N. Y.	Shanghai, China	Cotton, steel	6,094	5,139
Tamaho Maru	14	17	50	15	7	15	15	12	13	15	16	15	British	Shaw, Savill & Albion...	452.0	64.2	20.7	Liverpool, England	New Zealand	Ballast.	11,819	8,366
Capadocia	15	9	40	15	12	25	15	21	09	15	22	25	British	Imperial Oil Co.	510.9	68.2	22.0	Halifax, N. S.	Talara, Peru	Ballast	11,556	6,772
Cañaca	11	18	50	15	12	30	15	21	55	16	1	36	Colombian	National Navigation Co.	107.0	22.0	8.6	Cristobal, C. Z.	Buenaventura, Col.	General	75	262
Oakland	14	16	40	15	13	50	15	21	40	16	00	10	German	Hamburg-American Line	433.0	59.0	22.1	Hamburg, Germany	Vancouver, B. C.	Gen., bananas...	4,910	8,510
City of San Francisco	9	2	10	15	14	37	15	23	18	16	4	46	American	Panama Mail S. S. Co.	286.0	46.0	18.0	Cristobal, C. Z.	San Francisco, Cal.	General	1,010	3,848
Kimi	15	2	45	15	14	20	15	23	02	15	24	00	British	Union S. S. Co., N. Z.	229.0	39.0	11.10	Methil, England.	Wellington, N. Z.	Ballast	1,616	824
Sun	15	11	50	16	1	45	16	9	59	16	11	06	American	Sun Oil Co.	430.6	66.8	21.8	Chester, Pa.	Los Angeles, Calif	Ballast	9,620	6,476
Gragnese	15	12	35	16	3	05	16	11	27	16	12	35	British	Sir W. R. Smith & Sons	411.0	55.0	13.6	Barry, England.	Vancouver, B. C.	Ballast	7,022	5,250
Suriname	15	13	00	16	4	50	16	12	07	17	15	00	American	United Fruit Co.	337.0	41.0	17.3	Cristobal, C. Z.	San Francisco, Cal	Ballast	3,667	2,329
St. Michel	15	13	00	16	6	35	16	13	54	17	15	00	American	U. S. Army	436.0	58.0	24.0	Brooklyn, N. Y.	Balboa, C. Z.	General	348	
Nordic	15	13	00	16	6	35	16	13	54	17	15	00	Swedish	Transatlantic S. S. Co.	335.0	53.0	14.0	Camden, N. J.	Columbia River...	Ballast	5,457	3,878
La Paz	15	15	40	16	7	30	16	15	48	16	21	38	British	Pacific Steam Nav. Co.	406.0	54.0	24.4	Hull, England.	Valparaiso, Chile.	General	7,033	4,912
Pacific	16	2	35	16	9	40	16	17	08	17	18	10	British	Furness, Withy & Co.	450.4	60.8	19.5	Glasgow, Scotland	Portland, Oreg.	General	925	10,086
President	16	4	35	16	10	16	17	56	16	19	00	Chilean	Gia-Sud, Amer. de Vap.	422.8	56.2	25.6	New York, N. Y.	Valparaiso, Chile.	General	1,858	7,726	
Aconagua	16	12	10	16	14	10	16	21	35	16	23	05	American	Richell Oil Co.	390.0	54.2	16.0	Philadelphia, Pa.	Los Angeles, Calif	Ballast	6,209	4,703
Doris Kellogg	17	09	05	17	3	05	17	10	53	17	12	30	Belgian	Soc. Anon de Arment	440.0	57.0	21.0	Antwerp, Belgium	Los Angeles, Calif	Ballast	7,615	4,966
Labralat	16	12	30	17	4	15	17	12	12	17	13	05	British	Shaw, Savill & Albion.	500.0	63.0	23.9	London, England	Auckland, N. Z.	General	4,000	13,590
Mataros	16	12	30	17	4	15	17	12	12	17	13	05	British	Shaw, Savill & Albion.	500.0	63.0	23.9	London, England	Auckland, N. Z.	General	4,000	13,590
Helen	17	2	30	17	6	15	17	14	33	17	15	40	American	Sudden & Christenson.	409.6	54.2	16.0	Baltimore, Md	Los Angeles, Calif	General	2,215	6,667
Whittier	15	9	00	17	6	15	17	14	49	17	17	15	American	E. N. Norton	77.7	22.2	...	Cristobal, C. Z.	Pearl Islands, R.P	Ballast	98	55
White Shadow	16	14	30	17	8	50	17	15	42	17	19	24	American	Grace Line	360.0	51.7	23.3	New York, N. Y.	Valparaiso, Chile.	General	2,321	5,957
Santa Elisa	17	6	30	17	11	20	17	17	51	18	3	13	Briti	N. Z. Shipping Co.	472.0	67.0	24.0	Avonmouth, Eng.	Pr. Chalmers, N. Z.	General	4,008	

* Tanker.

* Yacht.

* Transport.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Marie Maersk * Bisca * Washington * Cauca * Bonington Court * Grede Bueno * Pennsylvania * Thyra * Mittelmeyer * Charles Nelson J. L. Luckenbach. Roche. Suriname. California Standard * Kentuckian * Pacific Spruce.	10 11 11 10 10 10 11 11 11 12 12 12 12 12 12 12 13 13 13	16 50 00 00 21 22 23 24 6 6 8 10 17 17 11 21 21 30	11 11 11 11 11 11 11 11 11 12 12 12 12 12 12 12 13 13 3	6 29 53 53 7 7 17 17 12 12 12 12 12 12 12 12 12 13	11 15 15 13 18 18 17 17 19 20 20 20 20 20 20 20 20 20	11 17 00 00 18 18 12 12 12 12 12 12 12 12 12 12 12 12	Danish Norwegian. French. Colombian. British. Venezuelan American. Norwegian. German. American. American. American. American. American. American. American. American. American. American.	Anglo-Saxon Pet. Co. P. Pyrding. French Line. National Navigation Co. Canadian Transp. Co. Venezuela Gulf Oil Co. The Texas Co. William Hansen. Anglo-Saxon Pet. Co. Nelson Line. Luckenbach Line. U. S. Navy. United Fruit Co. Standard Oil Co., Calif. Amer-Hawaiian Line. Dimon S. S. Corp. Standard Kentuckian Pacific Spruce.	466.3 395.2 493.9 107.2 405.5 325.0 416.8 270.1 412.6 380.4 448.9 384.0 336.7 513.5 414.5 410.5 513.5 414.5 410.5	61.8 55.1 61.2 22.9 55.5 55.0 56.1 38.1 55.1 53.1 60.2 64.9 41.9 68.2 53.7 54.0 53.7 53.7 53.7	27.2 26.0 27.0 10.0 25.0 12.0 26.0 16.4 25.0 25.0 29.0 26.0 20.0 30.0 28.2 25.0 25.0 25.0 25.0	Los Angeles, Calif. Los Angeles, Calif. Vancouver, B. C. Buenaventura, Col. Vancouver, B. C. Balboa, C. Z. Los Angeles, Calif. Tocopilla, Chile Los Angeles, Calif. Aberdeen, Wash. Portland, Oreg. Balboa, C. Z. San Francisco, Cal. Los Angeles, Calif. Portland, Oreg. Seattle, Wash. London, England Boston, Mass. Norfolk, Va.	Lands End, Eng. * Lands End, Eng. * Le Havre, France. Cristobal, C. Z. United Kingdom Maracaibo, Venez. New York, N. Y. Azores Lands End, Eng. * Baltimore, Md. Boston, Mass. Cristobal, C. Z. Cristobal, C. Z. London, England Portland, Oreg. Seattle, Wash. London, England Boston, Mass. Norfolk, Va.	Gasoline Benzine General. Coffee, rubber. Lumber, general Ballast Gasoline Nitrate of soda. Gasoline Lumber General Cruiser Coffee, general Gasoline General General General General	11,667 8,341 8,513 105 8,340 3,464 8,388 2,300 7,923 4,704 8,000 435 15,365 6,193 7,542 15,365 6,193 7,542	8,645 6,376 10,332 262 7,042 2,068 6,756 1,910 6,605 5,659 9,294 3,667 11,719 7,049 6,624 11,719 7,049 6,624
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* For orders.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Amelo	13	5 30	13	9 51	13	20 20	13	21 00	Dutch.....	Royal Neth. S. S. Co.	447.9	62.7	26.0	Valparaiso, Chile..	Hamburg, Germany	Nitrates, general.	9,371	9,656	6,849
Point Bonita ..	13	8 00	13	9 24	13	21 00	13	21 00	American...	Gulf-Pacfic Line, Ltd.	324.0	46.2	22.0	Vancouver, B. C.	New Orleans, La.	(*)	3,549	3,954	2,617
Port Hunter ..	13	11 25	13	12 02	13	21 50	13	21 50	British....	Leachurell & Co.	431.2	62.3	26.0	N. Plymouth, N. Z.	London, England..	Frozen, general..	6,660	11,170	8,208
Shipper 10.	13	14 25	13	14 29	13	23 55	14	2 05	British....	Furness, Withy & Co.	420.0	58.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.....	7,937	7,892	5,858
Tongariro	13	14 50	13	15 54	14	00 14	14	3 10	British....	N. Z. Shipping Co.	478.7	62.7	24.0	Bluff, N. Z.	London, England..	Frozen, general..	7,274	10,817	7,562
Andromeda	13	18 00	13	18 56	14	4 20	14	13 10	French....	Messageries Maritimes.	490.3	56.9	24.0	Noumea, N. C.	Marseilles, France	General.....	7,100	7,954	5,452
Steve 10.	19	20 20	14	6 15	14	13 55	14	13 55	No. regian..	Anglo-Saxon Pet. Co.	420.6	57.2	27.0	Los Angeles, Calif.	Guarico, D. W. I.	Gasoline.....	6,641	6,819	4,427
Pat Doherty ..	13	23 30	14	6 52	14	15 10	14	15 10	American...	Richfield Oil Co., Calif.	420.6	57.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.....	9,156	6,819	4,427
Steel Trawler ..	14	1 53	14	7 11	14	16 15	14	21 15	American...	Islandian S. S. Co.	424.2	56.2	25.0	Vancouver, B. C.	Avonmouth, Eng.	(*)	7,821	7,611	5,456
San Gabriel	14	9 30	14	10 20	14	19 00	14	19 00	American...	Pacific-Albion S. S. Co.	381.0	52.3	25.0	Seattle, Wash.	Baltimore, Md.	(*)	6,840	3,719	4,023
Lema 10.	14	10 03	14	11 04	14	20 53	15	1 00	American...	Nav. Bera-Restina.	390.0	57.0	27.0	Vancouver, B. C.	Prieste, Italy	General.....	9,102	8,805	6,497
Onesia	14	6 30	14	12 35	14	21 00	14	21 00	American...	Port Motor Co.	251.0	43.6	20.3	Long Beach, Calif.	Chester, Pa.	Lumber, auto pls	2,543	2,656	1,621
Westmoreland ..	14	10 20	14	14 06	14	22 05	14	22 05	British....	Federal Steam Nav. Co.	273.0	60.1	25.1	Wanganui, N. Z.	Glasgow, Scotland.	Frozen, general..	5,575	10,423	7,456
Moveria 10.	14	9 45	14	14 51	14	23 30	14	23 30	British....	Donaldson Bros., Ltd.	385.6	51.6	27.3	Vancouver, B. C.	Glasgow, Scotland.	General.....	5,690	6,576	4,724
San Angelmo ..	14	15 30	14	16 20	15	2 45	15	2 45	American...	Quaker Line	310.3	54.2	25.0	Portland, Oreg.	Camden, N. J.	Lumber, general.	7,232	6,753	4,857
Ecuador	14	11 20	15	6 27	15	14 55	16	3 30	American...	Panama Mail S. S. Co.	390.6	48.7	23.4	New York, N. Y.	New York, N. Y.	Coffee, general..	3,285	5,926	4,178
Trontolite 10.	14	18 20	15	6 38	15	19 30	15	19 30	British....	Bestrom Hansen A/S bel	419.4	57.2	30.0	Talara, Peru	Vallo, Norway	Crude oil.....	10,000	7,226	4,413
Constance	15	2 00	15	8 11	15	20 15	15	20 15	American...	Arrow Line	409.6	54.2	24.4	Portland, Oreg.	New York, N. Y.	Lumber.....	7,269	6,621	4,891
Lightburne 10.	14	20 45	15	8 37	15	21 20	15	21 20	American...	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Wilmington, N. C.	Gasoline.....	8,546	6,381	4,953
Huacnoten 10.	15	9 30	15	10 16	15	22 10	15	22 10	American...	Richfield Oil Co., Calif.	434.8	56.2	27.0	Los Angeles, Calif.	Lewes, Delaware.	Gasoline.....	9,504	7,394	5,099
Capra	15	11 00	15	11 36	16	00 20	16	22 30	Italian....	Nav. Gen. Italia	410.0	56.0	21.0	Valparaiso, Chile.	Genoa, Italy	General.....	2,014	5,444	6,008
Barak	15	13 25	15	14 06	16	00 15	16	00 00	Dutch....	Royal Neth. S. S. Co.	272.9	63.1	27.0	Buenaventura, Col.	Christobal, C. Z.	Coffee, general..	845	1,182	732
Taocana	15	15 30	15	16 18	16	3 30	16	21 30	German....	Harburg-American Line	277.3	63.1	27.0	Vancouver, B. C.	Hamburg, Germany	General.....	7,964	10,277	7,304
S-12 11.	15	16 48	16	1 25	16	16 10	16	16 10	American...	U. S. Navy	221.0	20.0	97.0	Balboa, C. Z.	Christobal, C. Z.	Ballast.....	12,223	9,625	6,889
Langager 10.	15	17 20	16	7 08	16	15 00	16	16 50	Norwegian..	Anglo-Saxon Pet. Co.	353.6	64.5	29.0	Los Angeles, Calif.	Sancti Eud, Belg.	Benzene.....	3,082	3,275	2,617
Point Fernin ..	15	19 34	16	7 03	16	15 30	16	15 30	American...	Gulf-Pacfic Line	353.0	46.2	22.0	Seattle, Wash.	New Orleans, La.	General.....	13,070	9,752	6,712
Brilliant 10.	15	22 30	16	7 14	16	18 30	16	18 30	American...	Standard Transp. Co.	480.3	65.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.....	3,581	7,773	5,294
Argus Maru	15	22 10	16	8 18	16	18 30	16	20 45	Japanese...	Osaka Steam Navigation Co.	419.0	55.5	24.0	Shanghai, China.	New York, N. Y.	Beans, general..	3,581	7,773	5,294
Caldas 10.	16	6 00	16	8 20	16	18 35	16	20 45	Colombian..	National Navigation Co.	116.0	21.1	92.0	Buenaventura, Col.	Christobal, C. Z.	Coffee.....	257	211	302
Alda	16	1 45	16	9 03	16	20 55	16	2 05	Colombian..	Northern Navigation Co.	329.6	21.0	92.0	Vancouver, B. C.	Antwerp, Belgium.	General.....	4,367	4,700	3,362
Cape Horn	16	4 00	16	9 25	16	22 00	16	22 00	British....	Lytle Shipping Co., Ltd.	425.0	56.0	25.0	Valparaiso, Chile.	London, England..	Wheat, lumber..	8,492	6,513	4,888
Caska Maru 10.	15	20 40	16	10 50	16	22 27	17	1 17	Japanese...	Nippon Yusen Kaisha.	415.0	57.0	26.0	Manila, P. I.	Boston, Mass.	(*)	6,580	8,979	5,797
Sulvador	16	13 55	16	14 25	16	23 30	17	1 25	British....	Pacific Steam Nav. Co.	215.0	33.5	28.0	San Jose, Guan.	Christobal, C. Z.	Coffee, general..	9,581	8,979	6,020
Californian 10.	16	14 15	16	15 13	17	2 55	17	3 40	American...	Ampa-Hawaiian Line.	415.0	57.0	27.0	Seattle, Wash.	Boston, Mass.	General.....	9,581	8,979	6,020
Dryden	16	14 45	16	16 30	17	2 55	17	3 40	American...	Tampa-Hawaiian Line.	433.3	57.0	27.0	Hongkong, China.	New Orleans, La.	(*)	8,514	7,983	5,863
Cerigo	16	19 15	16	19 54	17	4 55	17	4 55	German....	Hamburg-American Line	227.2	34.4	14.0	Guayquil, Ecuador	Christobal, C. Z.	(*)	327	1,572	1,011

10 Lumber, copper, and general.

11 Grain, canned goods, and spelter.

12 Coffee, cocoa, and hides.

13 For orders.

14 Submarine.

15 Motor ship.

16 Sugar, oil, tea, and general.

17 Copra, sugar, coconut oil, and matting.

18 Tanker.

19 For orders.

Broad Arrow 1	17	3.45	17	6.47	17	15.35	17	15.35	American.	General Petroleum Co.	457.6	62.7	27.4	Los Angeles, Calif	New York, N. Y.	Light fuel	11,779	9,700	6,804
Arana	17	7.15	17	8.07	17	16.45	17	19.45	British.	Pacific Steam Nav. Co.	303.4	43.0	19.0	Tecapilla, Guile	New York, N. Y.	Lumber	2,513	2,851	1,776
Santa Cecilia	17	8.00	17	9.05	17	17.20	17	17.20	American.	Argonaut S. S. Co.	404.6	53.9	25.0	Everett, Wash	Portsmouth, R. I.	Ballast	6,150	6,745	4,562
S-17 1	17	9.13	17	9.13	17	17.20	18	10.35	American.	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristofol, C. Z.	General			
Somme 19	16	14.35	17	15.03	17	22.25	18	11.00	American.	U. S. Army	445.0	58.0	25.0	San Francisco, Cal.	Gatun Lake, C. Z.	Ballast	90		
Major Pullen 20	17	7.06	12	7.06	12				American.	U. S. Army				Balboa, C. Z.					

1 Tanker. 19 Transport. 20 Launch. 21 Copper, ore, and coffee.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 10	Waunta.	Standard Fruit & S. S. Co.	Puerto Cabezas, Nicaragua	January 11	Swiftwind	Shell Eastern Petroleum Co.	Curacao, D. W. I.
January 11	Sosua.	United Fruit Co.	Bocas, Rep. of Panama.	January 11	Bogota	Colombian S. S. Line	New York via wayports.
January 11	Rugia.	Hamburg-American Line	Hamburg via wayports.	January 11	Sosua.	United Fruit Co.	Mobila, Ala.
January 12	Darien C-35 ²¹ .	Seadta Airplane Co.	Barranquilla and waypts.	January 11	Hercdia	United Fruit Co.	New Orleans and waypts.
January 12	No. 9685 ²¹ .	Pan American Airways	San Salvador and waypts.	January 12	Anacuena ²¹ .	United Fruit Co.	Colon, Rep. of Panama.
January 13	San Sebastian Elcano	Spanish S. S. Line	Barcelona via wayports.	January 12	Rugia.	Hamburg-American Line	Tampico via wayports.
January 13	No. 306-N ²¹ .	Pan American-Graze Airways	Talara via wayports.	January 12	Waunta.	Standard Fruit & S. S. Co.	La Ceiba.
January 14	Cristobal.	Panama R. R. S. S. Line	New York via Haiti.	January 14	No. 9584 ²¹ .	Pan American Airways	San Salvador and waypts.
January 14	Uta.	United Fruit Co.	New York via Habana.	January 14	Angium.	Elders & Fyfes Line	Avonmouth via wayports.
January 14	Reliance.	United Fruit Co.	New York via wayports.	January 15	Inapaquina ²¹ .	Pan American Airways	Colon, Rep. of Panama.
January 14	Angium.	Elders & Fyfes Line	Avonmouth via waypts.	January 15	No. 145-M ²¹ .	United Fruit Co.	La Guayra and wayports.
January 14	Skaola.	United Fruit Co.	New York via Kingston.	January 15	Skaola.	Hamburg-American Line	New York via wayports.
January 14	Tela.	United Fruit Co.	New Orleans, La.	January 15	Reliance.	Hamburg-American Line	Port Limon, Costa Rica.
January 14	Swiftscout.	Asiatic Petroleum Co.	Curacao, D. W. I.	January 15	Uta.	United Fruit Co.	Bocas, Rep. of Panama.
January 14	No. 9570 ²¹ .	Pan American Airways	San Salvador and waypts.	January 15	Tela.	United Fruit Co.	Curacao, D. W. I.
January 14	No. 668-M ²¹ .	Pan American Airways	Miami via wayports.	January 15	Swiftscout.	Asiatic Petroleum Co.	Barcelona and wayports.
January 14	Inapaquina ²¹ .	Pan American Airways	Colon, Rep. of Panama.	January 16	Juan Sebastian Elcano	Spanish S. S. Line	New York via wayports.
January 15	Stendand.	Holland-America Line	New York via wayports.	January 16	Stendand.	Holland-America Line	San Salvador and waypts.
January 15	F-7-A-B-C-L ²¹ .	Compania Mex. de Aviacion.	San Salvador and waypts.	January 16	No. 9685 ²¹ .	Pan American Airways	Barranquilla and waypts.
January 16	Amapala.	Standard Fruit & S. S. Co.	New Orleans and Habana.	January 16	Darien C-35 ²¹ .	Pan American Airways	Buffield and Port Limon.
January 16	Martinique.	Colombian S. S. Line.	New York via wayports.	January 17	Dora K. ²⁴ .	Seadta Airplane Co.	Paramaribo via wayports.
January 16	Lubeck S. S. Co.	United States Lines.	Houston via wayports.	January 17	Travemunde.	Lubeck S. S. Co.	New Orleans and waypts.
January 17	Reliance.	United Fruit Co.	Bocas, Rep. of Panama.	January 17	Tela.	United Fruit Co.	New Orleans via wayports.
January 17	Carinthia.	United States Lines.	Philadelphia and wayports.	January 17	Anapala.	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 17	Parisma.	Cunard S. S. Line.	New York via wayports.	January 17	Martinique.	Colombian S. S. Line.	New York via wayports.
January 17	August Thyssen.	United Fruit Co.	New Orleans and waypts.				
January 17	Dora K. ²⁴ .	Aluminum Line.	New Orleans and waypts.				
January 17	No. 9664 ²¹ .	A. L. Surgeon.	Colon, Rep. of Panama.				
January 17	No. 669-M ²¹ .	Pan American Airways.	San Salvador and waypts.				
January 17	No. 145-M ²¹ .	Pan American Airways.	Miami via wayports.				
January 17	No. 945-M ²¹ .	Pan American-Graze Airways.	La Guayra via wayports.				
January 17			Talara via wayports.				

22 Air mail carrier. 23 Motor boat. 24 Motor ship. * Other than ships passing through the Canal. (Continued on page 360, column 2.)

Hydrographic Notes for the Calendar Year 1930.

The following summary of water supply and consumption for Canal uses during the past calendar year has been furnished by the Chief of Surveys:

Chagres River: The discharge of the Chagres River at Alhajuela for the calendar year 1930 was 23 per cent below the 29-year average, or 61.4 billion cubic feet as compared with an average of 80.0 billion cubic feet. It was not the lowest discharge of record but approximated a number of other low year discharges, a list of which are given below:

Year.	Bill. cu. ft.	Year.	Bill. cu. ft.	Year.	Bill. cu. ft.
1895.....	67.2	1901.....	62.6	1920.....	65.9
1896.....	66.3	1905.....	47.9	1921.....	69.7
1897.....	69.5	1911.....	70.0	1925.....	61.3
1899.....	65.0	1912.....	67.4	1926.....	59.2
1900.....	58.3	1919.....	59.8	1929.....	64.9

NOTE.—The 29-year average period considered is from 1902 to 1930, inclusive. Records previous to 1902 are somewhat questionable.

The maximum and minimum yearly discharges of record are 153.8 billion cubic feet in 1909, and 47.9 billion cubic feet in 1905.

The maximum monthly discharge during the current year was 9.1 billion cubic feet in November, and the minimum 1.3 billion cubic feet in February.

The maximum momentary discharge was 33,540 cubic feet per second at elevation 105.06 feet on November 29th, and the minimum momentary discharge, 352 cubic feet per second at elevation 91.28 feet on April 7th and 8th.

Gatun Lake watershed: The net yield of the Gatun Lake watershed for the calendar year 1930 was 33 per cent below the 17-year average, or 118.7 billion cubic feet as compared with an average of 177.4 billion cubic feet. It is the lowest on record since the formation of Gatun Lake and follows the year 1929 with a net yield of 141.5 billion cubic feet, which was the lowest yearly yield over the period since the formation of Gatun Lake until superseded by the year just past. Hydrographic records of what is now the Gatun Lake watershed area extend back to 1890 although the yield over the period before the formation of the lake is not strictly comparable with the yield since its formation, nor are the older records based on as accurate data. They indicate, however, a dry year in 1905 and a dry cycle during the years 1899 and 1900. The year 1905 over what is now the Gatun Lake watershed was as dry or probably drier than the year just past but the years preceding and following 1905 furnished approximate normal yields, so that from a water supply standpoint the 1905 cycle can be disregarded. The years 1899 and 1900 are the nearest approach to the dry cycle of 1929 and 1930. The yields for these years were probably around 135 and 145 billion cubic feet, respectively. There is little doubt that the dry cycle 1929-1930, is the driest on record for the 41-year period 1890 to 1930, inclusive, and incomplete French records of the 1880's indicate that it probably is the driest cycle over the Gatun Lake watershed since hydrographic studies were begun; a period of approximately 50 years.

The maximum monthly total yield for the calendar year 1930 was 21.7 billion cubic feet in November, and the minimum minus 0.9 billion cubic feet in March (*i. e.*, more water evaporated than came into the lake as runoff). The total yield of the lake's watershed for the year amounted to 140.108 billion cubic feet (0.73 of the capacity of the lake), accounted for as follows:

	Percent.	Bill. cu. ft.
Runoff above Alhajuela.....	43.8	61.360
Yield from the land area below Alhajuela.....	33.7	47.150
Direct rainfall on the lake surface.....	22.5	31.598
Total.....	100.0	140.108

The items of disposition of this water were:

	Percent.	Bill. cu. ft.
Evaporation from lake surface.....	15.3	21.402
Gatun Lake lockages.....	27.6	38.751
Hydroelectric power.....	32.5	45.513
Spillway waste.....	23.2	32.470
Leakage and municipal water.....	1.2	1.653
Increase in storage.....	.2	.319
Total.....	100.0	140.108

Canal lockages (mean of Gatun and Pedro Miguel) averaged 16.5 per day during the year and required 6.424 million cubic feet of water per lockage. At this rate of water consumption per lockage the water wasted over Gatun Spillway was equivalent to 14 lockages per day, and the water used for power at Gatun was equivalent to 19.5 lockages per day. In other words if no water had been wasted and none used for power, the yield this year would have furnished water for 50 lockages per day. With a third flight of locks in operation and an increase in the requirements per lockage, the figure would of course be reduced.

This dry cycle which began in 1929 will require a revision of our water supply studies, but since the cycle is not complete, this is a matter that can well be deferred for the present. It is hardly likely that the dry cycle will last much longer than the close of the present dry season.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending January 17, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Bogota.....	Colombian S. S. Line.....	.....	January 11.....	.....	641
Wido.....	North German Lloyd.....	.....	January 11.....	.....	64
Heredia.....	United Fruit Co.....	.....	January 11.....	.....	111½
Abraham Lincoln.....	Fred Olsen & Co.....	.....	January 11.....	.....	672
Moerdijk.....	Holland-America Line.....	.....	January 11.....	.....	145
Lockkatrine.....	Royal Mail S. P. Co.....	.....	January 11.....	.....	188
Brynje.....	Canadian Transport Line.....	January 11.....	January 11.....	382	(*)
Rugia.....	North German Lloyd.....	January 11.....	January 12.....	100	6
Washington.....	French Line.....	January 11.....	January 12.....	116	(*)
Laurits Swenson.....	Fred Olsen & Co.....	January 11.....	January 12.....	40	(*)
Tamaba.....	Standard Transportation Co.....	January 11.....	January 13.....	7,143	777
El Salvador.....	Panama Mail S. S. Co.....	January 11.....	January 13.....	207	77
Cauca.....	National Navigation Co.....	January 11.....	January 15.....	94	116
Buenos Aires Maru.....	Osaka Shosen Kaisha.....	January 12.....	January 12.....	(*)	6
Nosa Queen.....	N. O. & S. A. S. S. Co.....	January 12.....	January 15.....	160	608
Winnipeg.....	French Line.....	January 13.....	January 13.....	45	75
Suriname.....	United Fruit Co.....	January 13.....	January 15.....	513	(*)
Juan Sebastian Elcano.....	Spanish S. S. Line.....	January 13.....	January 16.....	372	199
Almelo.....	Royal Netherlands S. S. Co.....	January 13.....	January 16.....	184	785
San Vincente.....	States S. S. Co.....	January 14.....	January 14.....	58	(*)
Leme.....	Nav. Libera-Triestina.....	January 14.....	January 15.....	(*)	129
Oakland.....	Hamburg-American Line.....	January 14.....	January 15.....	100	430
Tela.....	United Fruit Co.....	January 14.....	January 15.....	751	97
Swiftscout.....	C. D. Mallory & Co.....	January 14.....	January 15.....	11,612	(*)
Sixola.....	United Fruit Co.....	January 14.....	January 15.....	323	373
Ulua.....	United Fruit Co.....	January 14.....	January 15.....	320	25
Cristobal.....	Panama R. R. S. S. Line.....	January 14.....	.....	3,224	.....
City of San Francisco.....	Panama Mail S. S. Co.....	.....	January 15.....	.....	1,013
Ecuador.....	Panama Mail S. S. Co.....	January 15.....	January 16.....	1,925	267
La Paz.....	Pacific Steam Navigation Co.....	January 15.....	January 16.....	399	97
Argun Maru.....	Osaka Shosen Kaisha.....	January 16.....	January 16.....	10½	(*)
Asuka Maru.....	Nippon Yusen Kaisha.....	January 16.....	January 16.....	87	(*)
Caprera.....	Italian S. S. Line.....	January 16.....	January 16.....	24	1,030
Baralt.....	Royal Netherlands S. S. Co.....	January 16.....	January 16.....	326	.....
Aconcagua.....	Chilean S. S. Line.....	January 16.....	January 16.....	(*)	14
Tacoma.....	Hamburg-American Line.....	January 16.....	January 16.....	22	158
Salvador.....	Pacific Steam Navigation Co.....	January 16.....	January 16.....	281	.....
Travemunde.....	Aluminium Line.....	January 16.....	January 17.....	303	77
Caldas.....	National Navigation Co.....	January 16.....	January 16.....	257	.....
Amapala.....	Standard Fruit & S. S. Co.....	January 16.....	January 17.....	167	295
Santa Elisa.....	Grace Line.....	January 16.....	January 17.....	75	440
Martinique.....	Colombian S. S. Line.....	January 16.....	January 17.....	83½	461
Alda.....	North German Lloyd.....	January 16.....	January 17.....	2	562
Dora K.....	R. Feuillebois.....	January 17.....	January 17.....	(*)	12
Tela.....	United Fruit Co.....	January 17.....	January 17.....	3	314
Cerigo.....	Hamburg-American Line.....	January 17.....	January 17.....	527	.....
August Thyssen.....	Aluminium Line.....	January 17.....	January 17.....	181	.....

* No cargo discharged.

* No cargo laded.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel, Diesel oil \$1.80 per barrel, at Balboa and Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide the means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective, in the course of handling large traffic through the Canal in over 16 years of operation.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hind-quarters selling at 14½ cents per pound and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 357.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 8.	Bokuvo Maru.	Nippon Yusen Kaisha.	Hongkong, China.	January 9.	Bokuvo Maru.	Nippon Yusen Kaisha.	Valparaiso, Chile.
January 12.	S. A. Perkins.	James Griffiths & Sons.	Seattle, Wash.	January 11.	Ontarolite ¹ .	Standard Shipping Co.	Los Angeles, Calif.
January 14.	Almirante Grau.	Peruvian Government.	Callao, Peru.	January 12.	Condor.	W. R. Grace & Co.	San Francisco, Calif.
January 14.	Coronel Bolognesi.	Peruvian Government.	Callao, Peru.	January 14.	Suprema ² .	Van Camp Seafood Co.	Panama Bay, R. P.
January 14.	R-1 ²⁵ .	Peruvian Government.	Callao, Peru.	January 16.	S. A. Perkins.	James Griffiths & Sons.	Santa Rosalia, Mexico.
January 14.	R-2 ²⁵ .	Peruvian Government.	Callao, Peru.				
January 14.	R-3 ²⁵ .	Peruvian Government.	Callao, Peru.				
January 14.	R-4 ²⁵ .	Peruvian Government.	Callao, Peru.				

* Other than ships passing through the Canal

²⁵ Motor ship.

²⁵ Submarine.

²⁵ Tanker.

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Panama Canal Traffic During Calendar Year 1930, Segregated by Nationality of Vessels.

Vessels of 21 nationalities made up the commercial traffic through the Canal during the calendar year 1930. Forty-five and three-tenths per cent of the total transits were vessels of the United States and 25.4 per cent were of British registry. In order of net tonnage, Panama Canal measurement, the 10 leading nationalities were United States, British, Norwegian, German, Japanese, French, Dutch, Swedish, Danish, and Italian.

The following tabulation shows the commercial traffic through the Canal during the calendar year 1930, segregated according to nationality of vessels, together with corresponding totals for the calendar years 1929, 1928, and 1927. A similar table for the calendar year 1929 was published in THE PANAMA CANAL RECORD of January 29, 1930:

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered.			
				Gross.	Net.		
Argentinian.	1	3,816	3,370	5,518	3,146	\$2,747.52	.....
Belgian.....	25	125,689	107,596	159,232	96,653	131,879.12	190,271
British.....	*1,492	7,876,772	5,798,958	9,624,484	5,872,054	6,979,985.17	6,923,532
Chilean.....	*45	166,870	121,548	244,747	136,020	151,306.40	96,927
Colombian..	76	11,735	11,425	17,590	11,417	13,507.38	12,785
Danish.....	103	480,444	360,879	574,387	364,185	433,758.31	536,538
Danzig.....	35	222,411	183,045	311,691	174,166	196,832.27	206,809
Dutch.....	139	652,334	440,814	738,016	442,463	544,333.06	551,582
Finnish....	1	2,135	2,126	2,342	1,974	2,562.00	2,400
French.....	123	668,589	500,077	821,162	498,907	597,737.66	565,185
German.....	373	1,422,056	989,395	1,661,137	992,990	1,214,241.99	1,282,354
Greek.....	15	60,213	42,262	67,650	41,544	52,197.87	96,385
Italian.....	61	415,493	296,872	536,214	316,810	363,084.55	225,382
Japanese....	187	956,413	802,174	1,210,572	793,356	993,921.34	1,159,708
Norwegian..	353	1,724,219	1,221,045	2,020,287	1,220,085	1,409,380.61	1,776,973
Panamanian	47	109,300	71,556	119,974	72,146	84,718.34	80,533
Peruvian....	1	3,544	3,510	4,763	3,089	4,252.80	4,057
Spanish.....	*8	19,598	16,081	24,997	15,421	19,511.99	21,200
Swedish....	117	539,811	389,103	994,322	471,734	442,843.58	787,928
United States....	2,666	13,722,865	10,493,721	17,067,783	10,481,124	12,435,516.75	13,204,088
Yugoslav...	17	76,566	58,954	93,979	58,783	71,706.25	123,304
Total, 1930.	5,885	29,260,873	21,916,511	36,300,847	22,068,067	26,146,024.96	27,847,941
Total, 1929.	6,430	30,353,189	23,138,682	38,061,989	23,241,639	27,592,715.84	31,450,493
Total, 1928.	6,334	28,943,437	22,217,654	36,359,701	22,268,506	26,375,962.41	29,401,581
Total, 1927.	6,085	28,610,984	22,360,998	36,381,124	22,353,512	26,231,022.94	29,102,538

* Includes 10 naval vessels of 46,647 displacement tons.
 * Includes naval training ship of 3,383 displacement tons.

* Includes 3 naval vessels of 4,725 displacement tons.

RELATION SHOWN BY PERCENTAGE.

The proportion of the traffic by vessels of various nationalities are indicated in the following tabulation in which percentages of the total traffic are shown instead of the actual figures, for the calendar years

1929 and 1930. In this table percentages are shown only for those nationalities having 75 or more transits during either 1929 or 1930:

Nationality.	No. of vessels.		Panama Canal net tonnage.		Tolls.		Tons of cargo.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
United States.....	44.5	45.3	47.1	46.9	47.5	47.5	47.2	47.4
British.....	25.9	25.4	28.2	26.9	27.9	26.7	26.2	24.8
Norwegian.....	6.1	6.0	5.1	5.9	4.9	5.4	5.7	6.4
German.....	6.2	6.3	4.7	4.9	4.5	4.6	4.9	4.6
Japanese.....	2.3	3.2	2.5	3.3	2.8	3.8	2.9	4.2
French.....	1.7	2.1	1.7	2.3	1.9	2.3	1.7	2.0
Dutch.....	2.2	2.4	2.2	2.2	2.1	2.1	2.2	2.0
Swedish.....	2.2	2.0	2.0	1.8	1.9	1.7	2.7	2.8
Danish.....	1.4	1.7	1.2	1.6	1.2	1.7	1.6	1.9
Italian.....	1.3	1.0	1.6	1.4	1.6	1.4	1.0	0.8
Panamanian.....	0.9	0.8	0.3	0.4	0.3	0.3	0.3	0.3
Colombian.....	1.6	1.3	0.1	0.1	0.1	0.1	0.1	0.1
All other.....	3.7	2.5	3.3	2.3	3.3	2.4	3.5	2.7
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

During the calendar year 1930, vessels of 9 nationalities comprised 94.4 per cent of the total commercial transits of the Canal, and these vessels carried 96.2 per cent of the total cargo in transit through the Canal. Of these 9 nationalities, all showed decreases in comparison with the calendar year 1929 with the exception of Japan, France, and Denmark. The United States, with 2,666 transits, decreased 195, and Great Britain, with 1,492 transits, declined 175. Vessels of the United States registry carried 1,640,281 tons less cargo than in the previous year, and those of great Britain carried 1,339,323 tons less. Japan made the best showing during the year, with an increase of 37 transits and 248,989 tons more cargo.

The figures are given in the following tabulation:

Nationality.	Total transits.		Tons of cargo.		Increase.	
	1929.	1930.	1929.	1930.	Transits.	Cargo.
United States.....	2,861	2,666	14,844,369	13,204,088	195	1,640,281
British.....	1,667	1,492	8,262,855	6,923,532	175	1,339,323
Norwegian.....	392	353	1,784,651	1,776,973	39	7,678
German.....	402	373	1,532,149	1,282,354	29	249,795
Japanese.....	150	187	910,719	1,159,708	437	4248,989
French.....	113	123	538,491	565,185	410	426,694
Dutch.....	144	139	689,038	551,582	5	137,456
Swedish.....	140	117	864,502	787,928	23	76,574
Danish.....	94	103	496,451	536,538	49	440,087

* Indicates increase.

Supplement No. 2—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., January 5, 1931.

ITEM 34.—STEVEDORING AND TRANSFERRING CARGO. (Effective February 15, 1931.)

That part of paragraph 3(b) reading, "Cargo consigned to Cristobal-Colon on through bills of lading landed on the piers at Balboa—," etc., is hereby cancelled. Paragraph 24 is hereby cancelled and the following substituted:

24. Transportation—

(a) Transfer cargo between terminals:

Through cargo in transit across the Isthmus of Panama will be accepted for transfer across piers and for transportation over the Panama Railroad from the slings of the delivering carrier at one terminal to the slings of the receiving carrier at the other terminal, under the conditions of through bills of lading, and subject to

the rules and regulations and to the additional charges for storage after the expiration of the free period specified for through cargo, under Item 35 of this Tariff or as same may be modified from time to time, at the following net rates (without benefit of drawback) per ton:

(1) General cargo.....	\$6.00
(2) Coffee, cocoa, beans, guano, ivory nuts, nitrates and similar bagged commodities.....	5.00
(3) Live stock (including domestic and wild animals), live poultry and birds, and similar articles.....	16.00
(4) Explosives, acids, gas, fireworks, fuses, detonators, and similar articles.....	24.00
(5) Specie and treasure— Gold, silver, currency (value U. S. C.), articles freight <i>ad valorem</i> , and articles valued at \$500 or more per ton. In addition to the rate shown in sub-paragraph (1), up to a valuation of \$50,000; and for all value above \$50,000.....	$\frac{1}{3}$ of 1 per cent $\frac{1}{16}$ of 1 per cent
Minimum charge per shipment.....	\$5.00

(b) Isthmian cargo—

- (1) On cargo landed on the piers at Cristobal under through bills of lading for shipment over the Panama Railroad for delivery at line points of Balboa-Panama City; and on cargo landed on the piers at Balboa under through bills of lading for shipment over the Panama Railroad for delivery at line points or Cristobal-Colon, the Panama Railroad will accept forty-five per cent (45%) of the through freight when no other charges ordinarily belonging in a through freight rate are shown on the bills of lading. Under this arrangement, the Panama Railroad Company will transfer the cargo over the piers into cars and transport it over the railroad from ship-side to destination for 45% of the through freight charges, absorbing the pier transfer charges in its proportion of the through freight.
- (2) When the Isthmus (pier) transfer charge is shown on the bills of lading separate from the through freight, the Panama Railroad Company will take the transfer charge and thirty-three and one-third per cent (33 $\frac{1}{3}$ %) of the through freight charges shown on the bill of lading.
- (3) When charges (other than the Isthmus transfer charge) are shown on the bills of lading, which are or should be a part of the through freight rate, the Panama Railroad Company will add those charges to the basic through freight and take 45% of the total as its proportion of the through freight.
- (4) Cargo landed on the piers at Balboa for shipment over the Panama Railroad for delivery in Panama City will be subject to the rules, regulations and rates specified in sub-paragraphs (d) and (f) of paragraph 3, Item 34.

J. L. SCHLEY,

*Acting Governor, The Panama Canal,
2d Vice President, Panama Railroad Company.*

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 22, 1931.

No. 835.

Colombia, west coast, Buenaventura River, light established. The following is quoted from Notice to Mariners, Washington, D. C., dated January 3, 1931:

The master of the American M. S. *City of San Francisco* reports that an unwatched flashing white acetylene gas light has been established on the outer end of the pier at Buenaventura.

Approximate position: Lat. 3° 53' 00" N., long. 77° 05' 40" W.

H. BURGESS,
Governor.

CANAL WORK IN DECEMBER, 1930.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of December, 1930.

BALBOA HEIGHTS, C. Z., January 19, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of December, 1930. In it have been incorporated summaries of the traffic through the Canal during the past calendar year.

TRAFFIC FOR CALENDAR YEAR 1930.

Commercial transits for the calendar year ended December 31, 1930, aggregated 5,885, as compared with 6,430 for the calendar year 1929, and 6,334 for the calendar year 1928. The daily average number of commercial transits for the past year was 16.12.

In addition to the 5,885 commercial transits, 113 small nonseagoing launches, and 583 noncommercial vessels, principally of the United States Army and Navy, transited the Canal, making the total number of transits for the calendar year, 6,581, a daily average on all traffic of 18.03.

Tolls on the 5,885 commercial vessels aggregated \$26,146,024.96, or a daily average of \$71,632.95.

In comparison with the calendar year 1929 (which, with respect to measured tonnage, tolls, and tons of cargo carried, was the record high year in Canal traffic), traffic for 1930 decreased 8.5 per cent in the number of commercial transits, 3.6 per cent in Panama Canal net tonnage, 5.2 per cent in tolls collected, and 11.5 per cent in cargo. The greater portion of the decrease in cargo tonnage was in the Atlantic to Pacific movement, which consists principally of general and manufactured goods. The movement in this direction declined from 10,166,211 tons in 1929 to 8,064,438 in 1930, a decrease of 2,101,773 tons, or 20.7 per cent, while that in the opposite direction dropped from 21,284,282 tons in 1929 to 19,783,503 tons in 1930, a loss of 1,500,779 tons, or 7.1 per cent. As noted above, the decrease in net tonnage and tolls collected for the 1930 traffic were considerably less than the decrease in transits, indicating a greater average tonnage per vessel in comparison with the previous year.

The following tabulation gives a ready comparison of the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected from the commercial traffic passing through the Canal during the calendar years 1929 and 1930, by months:

COMMERCIAL TRAFFIC THROUGH THE CANAL DURING THE CALENDAR
YEARS 1929 AND 1930, BY MONTHS.*

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929.	1930.	1929.	1930.	1929.	1930.	1929.	1930.
January...	603	531	2,771,280	2,601,628	2,858,835	2,611,632	\$2,502,815.12	\$2,360,211.24
February...	522	491	2,428,530	2,369,255	2,550,498	2,377,900	2,211,961.20	2,131,386.12
March....	536	515	2,567,961	2,505,859	2,743,568	2,558,238	2,343,865.55	2,260,002.36
April.....	540	489	2,488,176	2,479,096	2,719,668	2,456,782	2,281,087.27	2,232,763.00
May.....	524	479	2,496,905	2,418,633	2,536,839	2,261,616	2,296,546.57	2,162,898.60
June.....	503	478	2,352,431	2,358,237	2,424,002	2,147,181	2,127,805.97	2,100,994.53
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	2,259,582.37	2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September.	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,992.08
November..	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December..	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
Total...	6,430	5,885	30,353,189	29,260,873	31,450,493	27,847,941	27,592,715.84	26,146,024.96

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

COMMERCIAL TRAFFIC BY CALENDAR YEARS, 1914 TO 1930.

The following statement is a summary of the traffic through the Canal by calendar years since its opening:

Calendar year.	No. of ships.	Panama Canal net tonnage.	United States net tonnage.	Registered.		Tolls.	Tons of cargo.
				Gross.	Net.		
1914.....	^a 350	1,284,293	(^a)	1,789,721	(^a)	\$1,508,737.56	1,758,625
1915.....	^a 1,154	3,902,512	(^a)	(^a)	(^a)	4,297,467.11	4,893,422
1916.....	^a 1,217	3,817,704	3,078,623	(^a)	(^a)	3,671,162.68	4,774,822
1917.....	1,960	6,217,054	5,116,001	(^a)	(^a)	6,107,696.63	7,443,610
1918.....	2,070	6,409,886	5,369,341	(^a)	(^a)	6,317,455.39	7,284,159
1919.....	2,130	6,932,984	5,828,118	7,719,306	4,919,189	6,973,095.30	7,463,151
1920.....	2,814	10,378,265	8,543,408	13,300,887	8,458,401	10,295,362.21	11,236,119
1921.....	2,783	11,435,811	9,303,687	14,451,830	9,225,519	11,261,098.80	10,707,005
1922.....	2,997	12,992,573	10,375,771	16,315,147	10,310,113	12,573,407.77	13,710,556
1923.....	5,037	24,737,437	19,979,628	31,658,095	19,931,570	22,966,838.18	25,160,545
1924.....	4,893	24,411,760	19,414,771	31,127,724	19,440,024	22,809,416.34	25,892,134
1925.....	4,774	22,958,158	18,141,695	29,368,840	18,228,704	21,380,759.70	23,701,277
1926.....	5,420	25,836,241	20,254,503	33,044,274	20,329,791	23,901,540.04	27,586,051
1927.....	6,085	28,610,984	22,360,998	36,381,124	22,353,512	26,231,022.94	29,102,538
1928.....	6,334	28,943,437	22,217,654	36,359,701	22,268,506	26,375,962.41	29,401,581
1929.....	6,430	30,353,189	23,138,682	38,061,959	23,241,639	27,592,715.84	31,450,493
1930.....	5,885	29,260,873	21,916,511	36,300,847	22,068,067	26,146,024.96	27,847,941
Total.....	62,333	278,483,161				260,409,763.86	289,414,029

^a Canal opened to traffic August 15, 1914.^a Canal opened to traffic for approximately 8½ months only.^b Indicates tonnage figures not available.

NUMBER OF VESSELS TRANSITING CANAL IN 1930.

The total number of vessels and craft of all kinds transiting the Canal during the calendar year 1930, by months, is shown in the following tabulation:

	Commercial.		Noncommercial.			Total.
	Vessels.	Launches. ^a	United States Government.	For repairs.	Panamanian Government.	
January.....	531	4	52	7	2	596
February.....	491	3	73	4	1	572
March.....	515	7	47	.....	1	570
April.....	489	7	43	1	1	541
May.....	479	14	48	3	2	546
June.....	478	14	73	.....	2	567
July.....	488	10	33	.....	2	533
August.....	465	19	41	.....	1	526
September.....	458	15	26	1	.....	500
October.....	517	7	39	1	2	566
November.....	479	4	40	3	1	527
December.....	495	9	31	2	.....	537
Total.....	5,885	113	546	22	15	6,581

^a Miscellaneous small nonseagoing craft which, although paying tolls, are excluded from the statement of commercial traffic.

CANAL TRAFFIC FOR DECEMBER, 1930.

During the month of December, 1930, 495 commercial vessels and 9 small launches transited the Canal. In addition to these there were 31 vessels belonging to the United States Government, and 2 vessels transiting solely for repairs, on which no tolls were collected, making a total of 537 transits for the month, or a daily average of 17.32

Tolls on the commercial vessels amounted to \$2,192,583.85, and on the launches to \$41.85, a total of \$2,192,625.70, or a daily average on all traffic of \$70,729.85.

Although showing a slight increase in comparison with the previous month (November, 1930), commercial traffic for the past month showed a decrease as compared with December, 1929, of 5.2 per cent in transits and 5.0 per cent in tolls collected.

The total numbers of craft of all kinds transiting the Canal during the month of December, 1930, and in the two preceding years are shown in the following tabulation:

	December, 1928.	December, 1929.	December, 1930.
Commercial vessels.....	579	522	495
Launches (under 20 tons measurement).....	11	9	9
Noncommercial vessels:			
United States Government.....	45	22	31
Panamanian Government.....	2	3	.....
Vessels for repairs.....	.....	1	2
Total.....	637	557	537

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	3	4	7
Pedro Miguel.....	6	11	17
Miraflores.....	6	10	16
Total.....	15	25	40

The following is a summary of the commercial traffic for December in the years 1928, 1929, and 1930, and comparison with the monthly averages for the calendar year 1930:

	December, 1928.	December, 1929.	December, 1930.	Average per month for calendar year 1930.
Number of vessels.....	579	522	495	490
Panama Canal net tonnage.....	2,698,140	2,548,771	2,473,626	2,438,406
United States net tonnage.....	2,055,648	1,929,935	1,834,879	1,826,376
Registered gross tonnage.....	3,359,731	3,173,958	3,060,391	3,025,071
Registered net tonnage.....	2,056,933	1,939,162	1,848,484	1,839,006
Tolls.....	\$2,443,029.39	\$2,309,020.88	\$2,192,583.85	\$2,178,835.41
Tons of cargo carried.....	2,714,987	2,524,934	2,166,884	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	December, 1928.	December, 1929.	December, 1930.	
Number of transits.....	18.67	16.84	15.97	16.12
Panama Canal net tonnage.....	87,037	82,218	79,794	80,167
Tolls.....	\$78,807.39	\$74,484.87	\$70,728.51	\$71,632.95
Tons of cargo.....	87,580	81,449	69,899	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of December in 1928, 1929, and 1930, are shown in the following tabulation:

	Average per vessel.		
	December, 1928.	December, 1929.	December, 1930.
Panama Canal net tonnage.....	4,660	4,883	4,997
United States net tonnage.....	3,550	3,697	3,707
Registered gross tonnage.....	5,803	6,080	6,183
Registered net tonnage.....	3,553	3,715	3,734
Tolls.....	\$4,219.39	\$4,423.43	\$4,429.46
Tons of cargo (including vessels in ballast).....	4,689	4,837	4,378
Tons of cargo (laden vessels only).....	5,740	5,562	5,209

NATIONALITY OF VESSELS.

Eighteen nationalities were represented in the commercial traffic through the Canal in December, 1930. Vessels of United States registry, with 206, led in the number of transits, while those flying the British flag, with 130, were second. Vessels of these two nationalities made up approximately 68 per cent of the total transits for the month. Germany and Norway were next with 34 and 31 respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo carried through the Canal during the month of December, 1930, was 2,166,884 tons. Cargo from the Atlantic to the Pacific aggregated 551,712 tons, compared with 554,098 tons in November, 1930, and 843,747 tons in December, 1929. From the Pacific to the Atlantic there were 1,615,172 tons, as compared with 1,709,102 tons in November, 1930, and 1,681,187 tons in December, 1929.

From the Atlantic to the Pacific various manufactured goods totaling 178,485 tons, constituted the heaviest item of cargo, followed by mineral oils with 38,098 tons, cotton with 27,847 tons, cement with 21,478 tons, and paper with 21,308 tons. There was a decrease of 292,035 tons, or 34.6 per cent, in cargo moving in this direction as

compared with December, 1929, owing to the general decline of practically all the important commodities normally routed in this direction.

From the Pacific to the Atlantic mineral oils, totaling 396,758 tons, constituted the heaviest item, followed by lumber with 280,728 tons, nitrates with 197,437 tons, wheat with 196,297 tons, and ores with 76,454 tons. Mineral oil shipments declined 90,519 tons, or 18.6 per cent, and ores 152,002 tons, or 66.5 per cent. Wheat increased 86,933 tons, or 79.5 per cent; lumber, 48,279 tons, or 20.8 per cent; and nitrates, 22,863 tons, or 13.1 per cent, in comparison with December, 1929.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.915 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.727 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of December, 1930, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60¢ ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$9,091.25	\$8,045.00		\$1,046.25
British.....	607,318.60	644,010.80	\$36,692.20	
Chilean.....	14,147.50	16,922.00	2,774.50	
Colombian.....	2,081.13	1,742.60		338.53
Danish.....	59,432.63	62,599.80	3,167.17	
Danzig.....	6,585.00	6,127.00		458.00
Dutch.....	56,579.27	66,164.60	9,585.33	
French.....	36,705.00	42,402.00	5,697.00	
German.....	115,804.71	128,339.00	12,534.29	
Greek.....	3,090.24	2,575.20		515.04
Italian.....	44,096.25	46,416.00	2,319.75	
Japanese.....	100,691.84	97,287.20		3,404.64
Norwegian.....	123,445.60	142,745.00	19,299.40	
Panamanian.....	5,026.30	6,979.00	1,952.70	
Spanish.....	5,343.88	4,916.40		427.48
Swedish.....	31,635.24	34,964.20	3,328.96	
United States.....	964,041.91	1,001,956.80	37,914.89	
Yugoslav.....	7,467.50	9,195.00	1,727.50	
Total.....	2,192,583.85	2,323,387.60	136,993.69	6,189.94
Net increase for all traffic.....			130,803.75	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$28,812.29
United States foreign trade.....	8,203.41
United States—Canal Zone trade.....	899.19
Total.....	37,914.89

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in December, 1930, is shown in the following tabulation, segregated by nationality of vessels and direction of transit, laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.70	1.70
British.....	.54	1.29	.95
Chilean.....	.36	.97	.80
Colombian.....	1.90	.99	1.53
Danish.....	.52	1.66	1.04
Danzig.....		1.83	1.83
Dutch.....	.35	1.27	.76
French.....	.36	1.40	.89
German.....	.50	1.37	1.03
Italian.....	.17	1.40	.55
Japanese.....	.76	1.07	.91
Norwegian.....	.85	1.54	1.36
Panamanian.....		.36	.36
Spanish.....		1.88	1.88
Swedish.....	.79	3.93	2.17
United States.....	.68	1.33	1.05
Yugoslav.....		1.78	1.78
Averages, December, 1930.....	.60	1.37	1.03
Averages, December, 1929.....	.84	1.42	1.14
Averages, December, 1928.....	.87	1.50	1.23

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of December is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	11,305	\$12,436.25	38	216,170	\$219,664.05
Ballast.....	36	204,431	147,190.32			
General cargo ships:						
Laden.....	173	887,118	799,134.80	202	964,563	871,978.65
Ballast.....	36	170,018	124,909.94	2	431	315.78
Noncargo-carrying ships:						
Passenger.....	1	18,874	16,412.50			
Tug.....	1	118	111.00			
Yachts.....	2	578	416.16	1	20	14.40
Total.....	252	1,292,442	1,100,610.97	243	1,181,184	1,091,972.88
Method of propulsion:						
Steam.....	171	857,482	752,998.00	179	859,621	800,614.65
Motor.....	80	434,402	347,211.21	64	321,563	291,358.23
Motor schooner.....	1	558	401.76			
Total.....	252	1,292,442	1,100,610.97	243	1,181,184	1,091,972.88

Of the 350 steam-driven vessels, 239 were oil burning, 103 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of December, 1930. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	1	3 4,405	\$5,506.25			
Battleships.....	1	32,600	16,300.00			
Gunboats.....	3	4,425	2,212.50	2	3,000	\$1,500.00
Minesweepers.....	3	2,850	1,425.00	2	1,900	950.00
Submarines.....	3	2,584	1,292.00	3	2,584	1,292.00
Supply ships.....	1	3,454	4,144.80			
Tankers.....				2	12,516	15,645.00
U. S. Army vessels:						
Launches.....	1	20	15.00			
Mineplanters.....				1	1,208	604.00
Transports.....	2	7,816	9,770.00	2	7,816	9,770.00
Tugs.....	1	46	34.50	1	46	34.50

* Indicates displacement tonnage.

* Indicates Panama Canal net tonnage.

* Indicates United States net tonnage

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
Treasury Department vessels:						
Coast guard vessels.....	1	912	\$456.00	1	912	\$456.00
Total, U. S. Government.....	17		41,156.05	14		30,251.50
Vessels for repairs:						
General cargo.....				1	3,217	4,021.25
Tankers.....				1	2,974	2,230.50
Grand total.....	17		41,156.05	16		36,503.25

* Indicates displacement tonnage.

* Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of December, 1930, carried cargo as follows: Atlantic to Pacific, 4,825 tons; Pacific to Atlantic, 29,117 tons; total, 33,942 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of December, 1930. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	6	45	\$37.35
Pacific to Atlantic.....	3	6	4.50
Total.....	9	51	41.85

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of December, 1930, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	35,527	20,167	55,694
Local cargo shipped..... tons..	6,582	1,041	7,623
Transit cargo arriving..... tons..	2,178,446	2,154,765	4,333,211
Transit cargo clearing..... tons..	2,190,336	2,140,315	4,330,651
Cargo received for transshipment..... tons..	26,722	3,900	30,622
Cargo transhipped..... tons..	25,219	3,244	28,463
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	174	50	224
Number of releases issued.....	786	276	1,062
Tons received.....	2,154	773	2,927
Tons withdrawn.....	1,772	595	2,367
Packages received.....	9,362	5,830	15,192
Packages withdrawn.....	6,045	5,085	11,130
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	46	3	49
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,332	126	15,458
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	126	32	158
Panama Railroad Company..... tons..	10	6	16
U. S. Army, including vessels..... tons..	31	1	32
Individuals and companies..... tons..	221		221
Transferred to Navy..... tons..	165		165
Total sales and issues..... tons..	15,855	165	16,020
Coal on hand, December 1, 1930..... tons..	55,211		55,211
Coal on hand, January 1, 1931..... tons..	39,326		39,326
Coal received from Navy..... tons..		165	165

	Cristobal.	Balboa.	Total.
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....bbls..	9,048.08	13,371.89	22,419.97
Panama Railroad Company.....bbls..	890.85	466.49	1,357.34
U. S. Army and Navy.....bbls..	522.50	138.81	661.31
U. S. Treasury Department.....bbls..		2,105.60	2,105.60
Individuals and companies.....bbls..		164.40	164.40
Total sales and issues.....bbls..	10,461.43	16,247.19	26,708.62
Fuel oil on hand, January 1, 1931.....bbls..	28,994.90	29,152.66	58,147.56
Diesel oil received during December, 1930.....bbls..		35,400.80	35,400.80
Diesel oil issued and sold during December, 1930.....bbls..	184.73	2,677.89	2,862.62
Diesel oil borrowed from Union Oil Co.....bbls..	184.73		184.73
Diesel oil on hand, January 1, 1931.....bbls..	1,083.28	41,875.32	42,958.60
Miscellaneous transfers.....bbls..	781.52	11,351.59	12,133.11
Gasoline and kerosene pumped for The Panama Canal.....bbls..	2,558.73	4,964.24	7,522.97
Gasoline pumped for individuals and companies.....bbls..	822.37	7,345.67	8,168.04
Oil pumped for individuals and companies:			
Receipts.....bbls..	186,613.03	142,563.10	329,176.13
Issues.....bbls..	271,117.10	201,339.03	472,456.13
Oil pumped for U. S. Navy.....bbls..	204.12	14,538.10	14,742.10
Total fuel oil, gasoline and kerosene handled.....bbls..	472,742.91	436,427.61	909,170.52
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	19	11	30
Measured for Panama Canal net tonnage.....	4	4	8
Remeasured for Panama Canal net tonnage.....	19	4	23
Panama Canal net tonnage corrected.....	10	1	11
U. S. equivalent tonnage corrected.....	15	7	22
Services of harbor equipment:			
Tugs, total operating hours.....	433	242½	675½
Launches, total operating hours.....	1,311	1,458½	2,769½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$14,071.25	\$7,403.75	\$21,475.00
Pilotage.....	19,199.00	8,201.00	27,400.00
Seamen.....	11,780.00	11,196.00	22,976.00
Launch service.....	1,993.00	2,833.00	4,826.00
Wharfage.....	15,041.90	6,283.66	21,325.56
Ships measured.....	110.00	55.00	165.00
Miscellaneous.....	464.21	170.50	634.71
Ships repaired at Panama Canal shops:			
Commercial.....	44	15	59
U. S. Army and Navy.....	7	8	15
Panama Canal equipment.....	6	9	15
Total.....	57	32	89
Vessels dry-docked:			
Commercial.....	9	4	13
U. S. Army and Navy.....	4	1	5
Panama Canal equipment.....	1	1	2
Total.....	14	6	20
Clearances issued.....	296	254	550
Bills of health issued.....	299	257	556

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	560	3,604,609	2,193,492	520	3,214,860	1,961,800
Vessels entering port but not transiting Canal.	66	451,131	266,984	8	38,329	24,428
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	126	803,689	480,747	103	689,764	412,789
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	557	3,600,459	2,189,375	514	3,199,316	1,948,350
Vessels clearing port but not transiting Canal.	64	435,402	256,219	6	35,222	22,418
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	124	810,227	484,203	102	691,024	413,478

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,391	913	2,304	118	193	311
From Pacific ports.....	118	112	230	296	240	536
Total disembarking.....	1,509	1,025	2,534	414	433	847
Embarking:						
For Atlantic ports.....	806	676	1,482	62	176	238
For Pacific ports.....	117	99	216	243	187	430
Totalembarking.....	923	775	1,698	305	363	668
Remaining on board:						
From Atlantic to Pacific ports.....	1,800	2,795	4,595	1,862	2,436	4,298
From Pacific to Atlantic ports.....	786	1,128	1,914	819	1,209	2,028
From Atlantic to Atlantic ports.....	2,655	111	2,766			
From Pacific to Pacific ports.....				2	3	5
Total remaining on board.....	5,241	4,034	9,275	2,683	3,648	6,331
Total arriving.....	6,750	5,059	11,809	3,097	4,081	7,178
Total departing.....	6,164	4,809	10,973	2,988	4,011	6,999

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	252	63	25.0
Pacific to Atlantic.....	243	58	23.9
Total.....	495	121	24.4

In addition to the aforesaid, 52 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of December, 1930, 43 commercial airplanes entered and 42 cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of December, 1930, together with the total sales in the corresponding month in 1929 and 1928:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,778.90	\$10,131.71	\$22,007.08	\$127.01	\$6,775.90	\$40,820.60
Government vessels.....	98.05	698.08	2,211.72	69.37	2,292.54	5,369.76
P. R. R. vessels.....		225.63	211.08	681.12	51.27	1,169.10
Totalsales, December, 1930..	1,876.95	11,055.42	24,429.88	877.50	9,119.71	47,359.46
Totalsales, December, 1929..	2,310.23	14,292.05	40,760.26	882.80	8,449.49	66,694.83
Totalsales, December, 1928..	4,059.92	17,666.78	57,682.04	1,125.14	9,116.95	89,650.83
Sales at Balboa to:						
Commercial vessels.....	1,004.00	2,654.29	17,027.98	799.14	9,093.47	30,578.88
Government vessels.....	216.25	1,780.39	8,696.85	688.88	2,097.26	13,479.63
P. R. R. vessels.....		.36			8.75	9.11
Totalsales, December, 1930.....	1,220.25	4,435.04	25,724.83	1,488.02	11,199.48	44,067.62
Totalsales, December, 1929.....	1,186.58	10,975.71	25,995.07	916.06	4,637.00	43,710.42
Total sales, December, 1928.....	3,097.76	10,834.52	40,119.66	737.13	3,766.52	58,555.59

The aggregate sales to Government vessels during the month was \$18,849.39; to Panama Railroad vessels, \$1,178.21; and to other commercial vessels, \$71,399.48; making the total sales to all vessels, \$91,427.08. The figures are subject to minor changes on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of December, 1930, as compared with the corresponding month in 1929 and 1928:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †			Dec., 1928.	Dec., 1929.	Dec., 1930.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	231	237	468	10	8	18	568	509	486
Pedro Miguel.....	237	246	483	13	13	26	601	538	509
Miraflores.....	238	246	484	13	13	26	590	533	510
Number of vessels put through locks.									
Gatun.....	241	252	493	25	30	55	672	576	548
Pedro Miguel.....	243	252	495	30	37	67	715	623	562
Miraflores.....	243	252	495	30	36	66	721	618	561

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	35	39	40
Panama Canal equipment.....	7	17	16
Launches (under 20 tons).....	12	9	8
Vessels for repairs.....	1	2	2

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in December, 1930, as compared with the preceding month and the corresponding month in 1929:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	2,071,880,000	1,676,650,000	1,524,550,000
Maintenance.....	53,150,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, December, 1930.....	2,165,030,000	1,696,650,000	1,544,550,000
Total, November, 1930.....	2,072,780,000	1,635,150,000	1,533,080,000
Total, December, 1929.....	1,900,300,000	1,787,390,000	1,588,490,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of December, 1930, are shown in comparative form in the following tabulation:

	December.		December—Years of record.		
	1930.	1929.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 2,367	<i>C. f. s.</i> 2,167	<i>C. f. s.</i> 17,300	<i>C. f. s.</i> 1,265	<i>C. f. s.</i> 3,687
Maximum momentary discharge for the month.....	11,922	9,455	154,000		
Gatun Lake watershed, total yield.....	5,436	4,583	10,959	3,005	7,124
Gatun Lake watershed, net yield.....	4,703	3,866	10,370	2,158	6,484
Draft on Gatun Lake for lockages and power.....	2,980	2,844	3,054	1,091	2,399

‡ December 26, 1909.

‡ 1914 excluded.

‡ Full power load.

The monthly mean discharge of the Chagres River at Alhajuela for December, 1930, was 2,367 c. f. s., which is 36 per cent below the 29-year average of 3,687 c. f. s.

The maximum monthly mean discharge on record for December is 17,300 c. f. s. in 1909, and the minimum is 1,265 c. f. s. in 1905. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 11,922 c. f. s. at elevation 98.52 feet on the 11th, and the minimum was 1,223 c. f. s. at elevation 92.55 feet on the 31st. The maximum momentary discharge on record

for December is 154,000 c. f. s. at elevation 121 feet on December 26, 1909, and the minimum is 970 c. f. s. at elevation 92.16 feet, on December 31, 1911.

Gatun Lake varied in elevation during December from a minimum of 86.70 feet on the 31st, to a maximum of 87.09 feet on the 9th and 11th, and averaged 86.96 feet. The elevation at midnight on November 30th was 86.84 feet and at midnight on December 31st 86.76 feet, showing a net fall of eight-hundredths of a foot. The total yield of Gatun Lake watershed was 5,436 c. f. s., which is 24 per cent below the 17-year December average of 7,124 c. f. s. The maximum total yield on record for December is 10,959 c. f. s. in 1928 and the minimum is 3,005 c. f. s. in 1918.

Miraflores Lake varied between elevations 53 feet on the 1st to 54.34 feet on the 30th. The mean elevation for the month was 53.78 feet, and at midnight on the 31st it was 53.98 feet.

SEISMOLOGY.

Two seismic disturbances were recorded during the month, on the 15th and 21st.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,593,200 kilowatt hours, and the computed water consumption was 4,177,184,909 cubic feet. Continuous service was maintained through the month. The Miraflores Diesel-electric station had a gross generator output of 1,200 kilowatt hours, and the fuel oil consumption was 9.36 barrels. This plant was operated only for peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 46 vessels during the month. There were 401 work orders issued during the month, as compared with 406 issued during the previous month.

MECHANICAL DIVISION.

During the month of December, 1930, miscellaneous repairs were made on 57 vessels at Cristobal and 32 at Balboa. Fourteen vessels were dry-docked at Cristobal and 6 at Balboa. Work on the United States Navy's gunboat *Asheville*, which was in dry dock for general overhaul, was completed during the month. Work was carried forward on the overhaul of the United States Navy's submarine *S-17*. Work was completed on the steamer *Ludwigshafen* which was at Balboa shops for repairs to fire damage. The cable ship *All America* was at Balboa shops for docking and annual overhaul.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 3,400 cubic yards were graded, 6 culverts placed, and 4,000 linear feet cleared. Miscellaneous municipal engineering work around the Naval Air Station, Coco Solo, consisting of excavating, concreting, pipe laying, etc., was performed during the month.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 765,652,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month with an average movement of 1.2 feet toward the Canal between stations 1770-00 and 1792-00 W. and 1.5 feet southward between stations 1770-00 and 1776-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

The total excavation during December, 1930, was 783,215 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 3.....	16,050	95,950	112,000
Canal prism, Pacific entrance—			
Project No. 1.....		42,850	42,850
Maintenance.....	11,000	1,700	12,700
Balboa inner harbor—			
Project No. 1, extension No. 1.....	91,400		91,400
Maintenance.....	343,550	51,100	394,650
Plant excavation:			
Colon fill.....	126,500		126,500
Dredging sand at Chame.....	3,115		3,115
Total.....	591,615	191,600	783,215

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred and sixty-four single trips were made, and 166 Panama Canal, 309 U. S. Army, and 5,076 other vehicles, a total of 5,551, were ferried across the Canal.

MADDEN DAM PROJECT.

Studies of an arch for a bridge over the spillway, of a concrete gravity dam, and a curved gravity dam were made. A comparison of a curved gravity dam and a straight gravity dam was prepared. Studies were made to determine maximum expected flood discharge for Alhajuela and Gatun. Flood hydrographs were produced and a flood regulation started. Tables and charts were prepared for the geological studies and report for the damsite. Two hundred and ninety-six linear feet of drilling were completed during the month. A first draft of final report on drilling was made. Compression tests were made at Miraflores laboratory of specimen cores from shot drill hole N-11. Permeability tests on stone were made of cores from drill holes L-47, L-63, and L-66, and report received from laboratory. Compression test of stone in place on damsite 6-B was completed. Reports were prepared on compression test of foundation stone in place, test of stone for elasticity, and on Madronal sinkholes. Observations of water table in drill holes were made weekly by the Section of Surveys. Laboratory report was received on results obtained from daily samples taken from the Chagres River.

The consulting board, consisting of four members, arrived from the United States on December 24th, and spent their time equally between the field and office.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on December 31, 1930, was 23,963, composed of 8,066 Americans, 2,881 of whom were men, 2,427 women, and 2,758 children; 158 Europeans, 80 of whom were men, 25 women, and 53 children; and 15,739 West Indians, 4,340 of whom were men, 2,848 women, and 8,551 children. The total number of persons in quarters on December 31, 1929, was 22,163.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of December 17, 1930, with a comparison of the working force for the preceding month and for December, 1929:

	Total employees.		As of December 17, 1930.		
	December, 1929.	November, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	160	117	56	61	117
Electrical.....	344	366	167	187	354
Municipal Engineering.....	802	972	100	935	1,035
Lock Operation.....	935	989	254	800	1,054
Dredging.....	1,262	1,181	200	982	1,182
Madden Project.....	720	192	21	118	139
Mechanical.....	1,430	1,426	508	911	1,419
Marine.....	785	777	200	561	761
Fortifications.....	281	165	22	287	309
Total.....	6,719	6,185	1,528	4,842	6,370
Supply Department:					
Quartermaster.....	2,437	1,730	201	1,689	1,890
Commissary.....	1,596	1,579	232	1,324	1,574
Cattle Industry—Plantations.....	117	99	2	96	98
Hotel Tivoli.....	120	118	8	107	115
Hotel Washington.....	110	107	8	103	111
Transportation.....	326	324	80	265	345
Total.....	4,706	3,957	531	3,602	4,133
Accounting Department.....	209	209	200	6	206
Health Department.....	1,158	1,108	280	840	1,120
Executive Department.....	852	883	547	339	886
Total.....	2,219	2,200	1,027	1,185	2,212
Panama Railroad Company:					
Superintendent.....	332	289	48	253	301
Transportation.....	173	193	63	124	187
Receiving & Forwarding Agency.....	1,269	1,222	80	1,292	1,372
Coaling Stations.....	247	208	43	183	226
Total.....	2,021	1,912	234	1,852	2,086
Grand total, December, 1929.....	15,665				
Grand total, November, 1930.....		14,254			
Grand total, December, 1930.....			3,320	11,481	14,801

Additions to the gold force on the Isthmus in December were as follows: Employed in the United States, 5; reemployed in the United States, 19; employed on the Isthmus, 9; reemployed on the Isthmus, 8; total, 41. Separations from the gold force totaled 20, as follows: Resigned, 8; discharged, 8; retired, 3; died, 1. At the end of the month there were on file 690 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 177 deaths occurred during the month of December, 1930, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 14.79 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 33; pneumonia (broncho and lobar), 21; diarrhea and enteritis, 14; nephritis (acute and chronic), 14; cancer, 8; and apoplexy, 8. There was 1 death each from typhoid fever, dysentery, and leprosy. There were 29 deaths among nonresidents, which are not included in the above statistics.

There were 347 live births and 14 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 30.16. Deaths among children under one year of age numbered 44, giving an infant mortality rate based on the number of live births reported, of 126.80.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 130, of whom 25 were employees (9 white and 16 colored), 20 were members of employees' families (4 white and 16 colored), 6 were Canal Zone agriculturists, 52 were other civilian nonemployees, and 27 were Army and Navy personnel. Of the 45 employees and members of employees' families, 31 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents, a Zone farmer.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisition for which invoices were received on the Isthmus during the month totaled \$433,265.80, of which \$421,661.86 was for the Department of Operation and Maintenance, and \$11,603.94 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$38,808.64.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of November, 1930, as compared with November, 1929, with the figures for the first five months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of December at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	November, 1929.	November, 1930.	To the end of November.	
			Last year.	This year.
Tolls.....	\$2,244,647.00	\$2,098,377.58	\$11,519,476.03	\$10,704,264.35
Other receipts.....	352,894.23	337,899.78	1,769,401.59	1,637,005.90
Total transit revenues.....	2,597,541.23	2,436,277.36	13,288,877.62	12,341,270.25
Total transit expenses.....	1,094,667.84	1,163,598.73	5,506,805.33	5,612,376.79
Net transit revenues.....	1,502,873.39	1,272,678.63	7,782,072.29	6,728,893.46
Three per cent capital charge.....	616,247.58	626,459.17	3,098,594.61	3,129,679.98
Transit surplus.....	886,625.81	646,219.46	4,683,477.68	3,599,213.48
Business revenues.....	1,579,451.83	1,275,216.57	7,897,246.09	7,542,052.47
Business expenses.....	1,513,097.54	1,217,967.79	7,488,209.54	7,213,391.58
Net business revenues.....	66,354.29	57,248.78	409,036.55	328,660.89
Three per cent capital charge.....	62,445.51	65,003.56	323,390.21	337,961.51
Business surplus.....	3,908.78	(7,754.78)	85,646.34	(9,300.62)
Combined revenues.....	4,176,993.06	3,711,493.93	21,186,123.71	19,883,322.72
Combined expenses.....	2,607,765.38	2,381,566.52	12,995,014.87	12,825,768.37
Net revenues.....	1,569,227.68	1,329,927.41	8,191,108.84	7,057,554.35
Three per cent capital charge.....	678,693.09	691,462.73	3,421,984.82	3,467,641.49
Combined surplus.....	890,534.59	638,464.68	4,769,124.02	3,589,912.86

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 24, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Longesford	18	00	15	18	18	17	18	15	British	Medonsley S. S. Co.	370.0	56.2	14.0	Tyne, England	Vancouver, B. C.	Ballast	83	5,195	3,515
Barat	18	00	50	18	18	17	18	15	Dutch	Royal Neth. S. S. Co.	200.0	33.1	11.10	Cristobal, C. Z.	Guayaquil, Ecuador	General	83	1,183	742
Mexican	18	2	00	18	18	18	18	18	American	Amer-Hawaiian Line	472.1	57.2	18.8	Portland, Ore.	Portland, Ore.	General	2,377	9,283	6,944
S-17	18	2	00	18	18	18	18	18	American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Bahoa, C. Z.	Ballast	2		
Somme	17	22	25	18	11	52	18	18	American	U. S. Army	436.0	58.0	25.6	San Francisco, Cal.	San Francisco, Cal.	General	2,623	6,687	4,974
Pacific Oak	18	16	40	19	3	20	19	11	American	Dimon S. S. Corp.	410.0	54.2	16.9	Philadelphia, Pa.	Seattle, Wash.	General	6,046	4,326	
El Cervo	18	22	15	19	5	15	19	14	British	Anglo-Ecuador. Oilfields.	407.0	52.2	19.8	Philadelphia, Pa.	La Libertad, Ecua.	Ballast	4,126	7,507	5,346
Laganbank	18	22	30	19	6	10	19	14	British	Bank Line, Ltd.	427.0	57.0	21.6	Baltimore, Md.	Swatow, China	General	3,700	9,313	6,672
Cingalese	19	00	08	19	10	19	14	16	British	Prince Line, Ltd.	441.0	60.0	20.9	New York, N. Y.	Manila, P. I.	General	8,336	5,404	
Prince	19	1	00	19	7	30	19	15	British	Blue Star Line	450.0	58.0	20.6	Hull, England	Vancouver, B. C.	Ballast	7,931	7,087	5,022
Fresnostar	19	1	00	19	8	20	19	16	Norwegian	Pet. Stor. & Fin. Corp.	408.3	55.3	17.0	Ellesmere Pt., Eng.	Los Angeles, Calif.	Ballast	10,917	8,085	5,725
Svalder	19	3	15	19	8	20	19	19	Norwegian	Bank Line, Ltd.	420.0	59.2	25.4	Pt. Tampa, Fla.	Shanghai, China	(?)	3,357	7,480	5,533
Foresbank	19	6	05	19	9	35	19	19	British	Sigard Herlofson	441.0	59.2	26.0	Curacao, D. W. I.	Bahoa, C. Z.	Gas oil	3,108	7,322	4,798
Herbjorn	19	10	00	19	10	25	19	18	Norwegian	Johnson Line	426.0	56.0	20.1	Stockholm, Sweden	Vancouver, B. C.	General	537	7,286	5,174
Bahoa	19	2	40	19	11	05	19	19	Swedish	Royal Mail S. P. Co.	450.0	58.0	18.0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	909	6,809	4,842
Narenta	19	6	40	19	12	30	19	21	British	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Bahoa, C. Z.	Ballast	7,750	5,615	
Sean	19	1	40	19	23	50	19	16	American	Royal Neth. S. S. Co.	402.0	58.0	21.10	Hamburg, Germany	Corral, Chile	Ballast	6,690	7,780	5,811
Balle	19	1	40	19	23	50	19	16	Dutch	U. S. Army	436.9	58.2	25.10	New York, N. Y.	Honolulu, T. H.	General	2,203	7,107	5,041
Chateau	19	7	00	20	1	10	20	12	American	Hamburg-American Line	438.4	55.2	23.4	Hamburg, Germany	Valparaiso, Chile	General	5,123	9,381	6,915
Thierry	19	15	20	20	2	45	20	14	German	Donaldson Brothers	415.6	54.0	23.3	Glasgow, Scotland	Vancouver, B. C.	General	4,769	10,267	7,252
Amasa	20	12	10	20	4	10	20	16	British	The Texas Co.	509.7	70.3	23.0	New York, N. Y.	Los Angeles, Calif.	Ballast	6,513	4,724	
Gracia	20	1	40	20	5	50	20	17	American	Richfield Oil Co.	429.0	59.2	26.0	New York, N. Y.	Los Angeles, Calif.	Ballast	6,952	5,005	
Australia	20	5	45	20	6	25	20	23	American	U. S. Navy	585.0	65.0	25.1	Baltimore, Md.	Seattle, Wash.	Ballast	2,881	9,027	6,539
Aeworld	20	7	00	20	7	45	20	17	American	Norton, Lilly & Co.	410.0	56.0	25.0	Baltimore, Md.	Seattle, Wash.	General steel, tin	2,881	9,027	6,539
Houston	20	6	20	20	8	30	20	18	American	W. T. Schlicht Rheerei	470.0	63.0	23.7	Hamburg, Germany	Talara, Peru	Ballast	2,203	7,107	5,041
Challenger	20	3	45	20	10	00	20	18	Danish	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Bahoa, C. Z.	Ballast	5,123	9,381	6,915
Penelope	20	3	45	20	10	00	20	18	American	Amer-Hawaiian Line	470.7	58.7	19.0	Boston, Mass.	Seattle, Wash.	General	6,151	4,459	
S-15	20	9	45	20	13	30	20	19	American	Com'th & Dom. Line	407.1	53.4	26.2	New York, N. Y.	Dunedin, N. Z.	General, asphalt	4,769	10,267	7,252
Pennsylvania	20	9	45	20	13	30	20	19	British	W. L. Conyn & Co.	412.1	54.2	16.0	Newcastle, England	Vancouver, B. C.	Ballast	6,513	4,724	
Port Erie	20	23	55	20	11	30	20	32	British	Hamburg-American Line	470.7	63.0	23.6	Hamburg, Germany	Puget Sound, Wash.	General	6,952	5,005	
Lackenby	20	8	45	20	12	30	20	21	British	W. L. Conyn & Co.	412.1	54.2	16.0	Newcastle, England	Vancouver, B. C.	Ballast	2,881	9,027	6,539
Vancouver	20	9	30	21	1	35	21	10	German	W. L. Conyn & Co.	412.1	54.2	16.0	Newcastle, England	Vancouver, B. C.	Ballast	2,881	9,027	6,539
Emile L. D.	20	18	35	21	3	40	21	12	French	Louis Dreyfus & Co.	400.0	52.9	15.0	Norfolk, Va.	Puget Sound, Wash.	Ballast	6,952	5,005	
Jersey City	20	22	40	21	4	20	21	13	British	Sir W. R. Smith & Sons	411.6	55.0	16.0	N. Shields, England	Vancouver, B. C.	Ballast	2,881	9,027	6,539
Paul	20	22	40	21	4	20	21	13	British	Sir W. R. Smith & Sons	411.6	55.0	16.0	N. Shields, England	Vancouver, B. C.	Ballast	2,881	9,027	6,539
Luckenbach	21	5	45	21	6	35	21	15	American	Luckenbach Line	471.1	59.2	20.7	Boston, Mass.	Tacoma, Wash.	General	5,323	8,508	6,648
Edgar F.	21	7	50	21	8	25	21	15	American	Luckenbach Line	471.1	59.2	20.7	Boston, Mass.	Tacoma, Wash.	General	5,323	8,508	6,648
Luckenbach	21	7	50	21	8	25	21	15	American	Luckenbach Line	471.1	59.2	20.7	Boston, Mass.	Tacoma, Wash.	General	5,323	8,508	6,648

* General, cement, and iron.

* Cotton and phosphates.

* Cruiser.

* Minesweeper.

* Motor ship.

* Transport.

* Submarine.

* Tanker.

	9	23	50	21	9	20	21	16	41	21	20	50	German	Hamburg-American Line	227.0	34.0	13.2	Cristobal, C. Z.	Guayaquil, Ecuador	General	125	1,633	1,041
Durazzo	21	10	00	21	10	10	21	17	34	21	18	38	British	Dupont Co.	335.0	51.0	14.3	Norfolk, Va.	Inouque, Chile	Ballast	4,770	3,403	
Gibraltar	21	23	50	21	11	10	21	19	22	21	20	20	British	Shaw, Swill & Albion.	478.0	62.0	27.6	Antwerp, Belgium	New Plymouth, N.Z.	Base slag	5,942	1,192	8,149
Tarao	20	19	35	21	12	45	21	20	16	21	18	18	Panama	T. & J. Harrison.	335.0	52.0	14.6	Liverpool, England	Vancouver, B. C.	Ballast	5,212	3,578	
Muscat	21	14	30	21	00	50	21	00	50	21	11	15	Panama	M. D. Joly	500.0	68.1	23.0	Cristobal, C. Z.	Gatun, C. Z.	Unknown	10,019	10,853	8,272
Chela	21	14	30	21	00	50	21	00	50	21	11	15	Panama	The Texas Co.	500.0	68.1	23.0	Pt. Arthur, Tex.	Los Angeles, Calif.	Fuel oil	3,790	6,584	5,030
California	22	10	25	22	6	45	22	10	33	22	12	45	American	McCormick S. S. Co.	410.0	54.0	20.8	La Plata, Argentina	Wilmington, Calif.	General	4,912	8,859	6,094
Hollywood	22	6	10	22	6	45	22	13	00	22	14	05	British	Barber S. S. Line.	404.0	60.0	23.0	Philadelphia, Pa.	Osaka, Japan	General	9,731	1,270	735
Pearlth	22	15	40	22	13	15	22	30	39	22	21	48	British	Pacific Steam Nav. Co.	215.0	33.0	15.7	Cristobal, C. Z.	Champerico, Guat.	General	4,179	10,626	6,680
San Salvador	22	15	40	22	16	00	22	22	21	23	9	58	American	Grace Line.	406.0	64.0	25.0	Cristobal, C. Z.	Talcahuano, Chile	General	1,743	11,721	8,351
Santa Maria	22	17	50	23	0	55	23	9	37	23	10	29	Dutch	Holland-America Line.	490.0	66.0	25.6	Rotterdam, Holland	Vancouver, B. C.	General	3,663	9,907	6,551
Damsterdam	22	17	50	23	2	45	23	03	53	23	12	05	American	San Oil Co.	480.0	66.0	25.6	New York, N. Y.	Los Angeles, Calif.	Ballast	2,821	5,832	9,734
Western Sun	22	17	50	23	2	45	23	03	53	23	12	05	American	Gulf-Pac Line.	324.0	46.2	21.0	Houston, Tex.	Vancouver, B. C.	General	3,663	9,907	6,551
Point Reyes	22	21	10	23	4	20	23	15	54	23	14	00	American	United Fruit Co.	325.2	48.1	21.7	Cristobal, C. Z.	San Francisco, Cal.	Ballast	2,788	12,073	8,405
La Parla	23	1	20	23	6	25	23	14	03	23	21	25	American	Dollar Line.	502.0	62.2	24.0	New York, N. Y.	Round the world	General	2,840	25,454	18,170
Van Buren	23	6	05	23	7	35	23	15	16	24	1	58	American	Panama-Pacific Line.	586.4	80.3	27.3	New York, N. Y.	San Francisco, Cal.	General	4,809	5,179	3,761
Virginia	23	7	25	23	8	30	23	17	00	23	18	05	Norwegian	Isbrandt & Moller	537.4	54.1	20.6	Baltimore, Md.	Manila, P. I.	General	3,658	6,609	4,973
Egle	23	4	05	23	10	40	23	17	48	23	18	55	American	Inter. Freight Corp.	411.0	54.1	21.0	Baltimore, Md.	Antofagasta, Chile.	General, steel	7,321	5,832	9,734
Chilop	23	16	45	23	23	30	24	9	20	24	10	23	British	Union Cold Storage	420.0	54.0	19.0	Tyne, England	Seattle, Wash.	Ballast	1,117	5,858	4,108
Gothicstar	23	18	00	24	2	45	24	11	29	24	12	35	British	Tidewater Oil Co.	430.0	66.0	24.0	Chester, Pa.	Los Angeles, Calif.	Ballast	7,321	5,832	9,734
Tidewater	23	18	00	24	2	45	24	11	29	24	12	35	British	Can. Nat. Steamships	400.0	52.0	16.0	St. John, N. B.	Vancouver, B. C.	General	1,117	5,858	4,108
Canadian	23	20	20	24	4	05	24	12	53	24	14	05	British	Reardon Smith Line.	416.0	55.0	15.0	Liverpool, England	Vancouver, B. C.	Ballast	7,272	5,494	4,795
Vancouver	23	21	40	24	5	40	24	14	07	24	15	15	American	Calmar S. S. Corp.	409.8	54.2	18.0	Baltimore, Md.	Seattle, Wash.	Steel, general	2,824	6,581	4,795
Portmar	23	21	40	24	5	40	24	14	07	24	15	15	American	Calmar S. S. Corp.	409.8	54.2	18.0	Baltimore, Md.	Seattle, Wash.	Steel, general	2,824	6,581	4,795
Chas. R.	24	1	15	24	6	35	24	15	05	24	16	15	American	McCormick S. S. Co.	401.4	53.2	19.0	Baltimore, Md.	Seattle, Wash.	General	3,200	7,082	5,167
McCormick	24	3	00	24	7	35	24	15	45	24	16	55	British	Inter. Freight Corp.	412.0	56.0	16.0	Norfolk, Va.	Tocopilla, Chile	Ballast	6,554	4,633	3,796
Grantley Hall	24	6	00	24	8	30	24	16	30	24	17	35	American	The Texas Co.	477.3	63.0	21.0	Port Arthur, Tex.	Los Angeles, Calif.	Ballast	6,925	4,982	3,842
New Jersey	24	6	15	24	9	30	24	17	42	25	00	18	British	Com'lth & Dom. Line	303.0	54.0	16.0	London, England	Bluff, N. Z.	General	3,560	10,684	7,996
Port Alma	24	13	03	24	14	30	24	22	45	24	23	48	British	Pacific Steam Nav. Co.	409.0	54.0	16.0	New York, N. Y.	Tocopilla, Chile	General	922	2,826	1,770
Almagro	24	13	03	24	14	30	24	22	45	24	23	48	British	Pacific Steam Nav. Co.	409.0	54.0	16.0	New York, N. Y.	Tocopilla, Chile	General	922	2,826	1,770
San Felipe	24	13	03	24	14	30	24	22	45	24	23	48	American	Williams S. S. Line.	409.0	54.0	16.0	Baltimore, Md.	Seattle, Wash.	General	1,418	8,821	4,927
El Lobo	24	13	03	24	14	30	24	22	45	24	23	48	British	Atlantic Refining Co.	385.2	51.0	19.0	Philadelphia, Pa.	La Libertad, Ecua.	Ballast	4,851	3,326	2,480

* Launch.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Chilore.....	16	10	30	18	6	16	18	17	20	18	17	20	American.	Ore S. S. Corp.	549.6	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,000	14,538	4,480
Roxoloke.....	17	23	30	18	6	43	18	15	30	18	15	30	American.	The Texas Co.	416.8	56.1	26.0	Los Angeles, Calif.	Marcus Hook, Pa.	Gasoline.....	8,323	6,931	4,999
Camden.....	18	2	00	18	7	47	18	15	30	18	15	30	American.	U. S. Navy	339.2	43.0	21.0	San Diego, Calif.	Philadelphia, Pa.	Tender.....			
Chewink *.....	18	2	00	18	7	56	18	15	30	18	15	30	American.	U. S. Navy	130.0	33.6		San Diego, Calif.	Cristobal, C. Z.	Ballast.....			
R-1 **.....	18	2	00	18	8	12	18	19	30	18	19	30	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-2 **.....	18	2	00	18	8	12	18	19	30	18	19	30	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-3 **.....	18	2	00	18	8	12	18	19	30	18	19	30	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-4 **.....	18	2	00	18	8	12	18	19	30	18	19	30	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-5 **.....	18	7	15	18	9	03	18	21	25	19	00	05	Greek.	Anglo-Chilean Nit & Co.	400.5	52.0	26.0	Tocopilla, Chile.	Azores.	Nitrate of soda	8,400	5,724	4,292
Archangelos.....	18	2	00	18	9	04	18	21	45	18	21	45	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-6 **.....	18	2	00	18	9	04	18	21	45	18	21	45	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			
R-7 **.....	18	2	00	18	9	04	18	21	45	18	21	45	American.	U. S. Navy	184.0	18.0		San Diego, Calif.	Coco Solo, C. Z.	Ballast.....			

* Tanker.
** Tug.
** Submarine.

** Submarine.

** Tug.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
R-3 1/2	18	2.00	18	9.18	18	21.45	18	21.45	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-9 1/2	18	2.00	18	9.18	18	21.45	18	21.45	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-13 1/2	18	2.00	18	9.37	18	22.15	18	22.15	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-15 1/2	18	2.00	18	9.37	18	22.15	18	22.15	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-16 1/2	18	2.00	18	9.40	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-17 1/2	18	2.00	18	9.40	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-17 1/2	18	2.00	18	9.40	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-17 1/2	18	2.00	18	9.40	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-17 1/2	18	2.00	18	9.40	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-18 1/2	18	2.00	18	10.28	18	00.05	18	00.05	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-18 1/2	18	2.00	18	10.28	18	00.05	18	00.05	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-18 1/2	18	2.00	18	10.48	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-18 1/2	18	2.00	18	10.48	18	23.25	18	23.25	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-18 1/2	18	2.00	18	11.08	18	1.35	18	1.35	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-19 1/2	18	2.00	18	11.08	18	1.35	18	1.35	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-19 1/2	18	2.00	18	11.18	18	1.35	18	1.35	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
R-20 1/2	18	2.00	18	11.18	18	1.35	18	1.35	American	U. S. Navy	184.0	18.0	...	San Diego, Calif.	Coco Solo, C. Z.	Ballast	...	...	...
Relay	8	21.45	18	11.27	19	3.35	18	3.35	American	All America Cables	240.0	32.0	17.0	Salina Cruz, Mex.	New York, N. Y.	Cable	...	1,201	675
Cal.	18	9.00	18	12.45	19	3.35	18	3.35	German	Rolland Line	216.5	32.9	12.0	Guaymas, Mexico	Quebec, C. Z.	General	460	1,105	695
Voco 1	18	14.00	18	15.04	19	5.05	19	5.05	British	Vacuum Oil Co., N. Y.	460.0	62.8	28.0	Estero Bay, Calif.	Wilhelmshaven, Ger.	Crude oil	11,945	2,174	6,097
Lumina 1	19	8.30	19	9.17	19	18.40	20	1.19	British	Anglo-Saxon Pet. Co.	407.6	52.3	25.0	San Francisco, Cal.	Laurel, Ind. Ind.	Gasoline	7,400	5,940	4,108
Kenowa	16	7.30	19	13.18	19	21.00	19	21.00	American	U. S. Army	390.0	54.2	20.3	San Francisco, Cal.	New York, N. Y.	Army supplies	67	...	...
Santa	19	11.05	19	14.04	19	22.20	20	1.55	American	Grace Line	480.0	64.0	22.2	Talcahuano, Chile	New York, N. Y.	(+)	2,932	10,687	6,633
Barbara 1	19	10.00	20	6.12	20	17.30	20	18.13	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General	4,802	25,262	18,194
St. Mihail	19	10.00	20	6.43	20	18.20	21	11.00	American	U. S. Army	435.0	58.0	26.0	Bahoa, C. Z.	Brooklyn, N. Y.	Army supplies	600	4,033	2,261
La Perla	19	14.45	20	7.19	20	19.00	20	19.00	American	United Fruit Co.	328.2	48.1	20.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	...	...	...
General M.	20	3.30	20	8.39	20	19.55	20	21.10	American	Sudden & Christenson.	402.6	53.0	27.0	Portland, Ore.	New York, N. Y.	Lumber	7,300	6,575	4,912
Sherman	20	4.10	20	9.12	20	20.40	20	20.40	American	Amer-Hawaiian Line	407.7	53.7	24.3	Portland, Ore.	Boston, Mass.	General	7,958	7,079	5,028
Iowan	20	4.10	20	9.12	20	20.40	20	20.40	American	Amer-Hawaiian Line	407.7	53.7	24.3	Portland, Ore.	Boston, Mass.	General	7,958	7,079	5,028
Susan V.	20	7.25	20	9.49	20	21.35	20	21.35	American	French Line	434.3	57.7	27.0	Seattle, Wash.	Boston, Mass.	Lumber, general	6,842	7,947	5,688
Lukenbach	20	11.40	20	12.25	20	23.10	21	12.19	French	Lukenbach Line	415.0	50.3	25.3	San Antonio, Chile	Le Havre, France	Nitrates, copper	9,851	5,857	4,166
Saint Louis	20	16.30	20	17.05	21	1.30	21	3.55	British	Sir W. R. Smith & Sons	400.0	54.3	25.0	Vancouver, B. C.	Cardiff, Wales	General	7,900	6,901	5,365
Bradlyne	20	16.30	20	17.05	21	1.30	21	3.55	British	Sir W. R. Smith & Sons	400.0	54.3	25.0	Vancouver, B. C.	Cardiff, Wales	General	7,900	6,901	5,365
Julia	20	17.00	20	17.47	21	2.30	21	2.30	American	Lukenbach Line	436.6	57.2	20.0	Portland, Ore.	Mobile, Ala.	General	2,508	8,543	6,402
Lukenbach	20	17.00	20	17.47	21	2.30	21	2.30	American	Lukenbach Line	436.6	57.2	20.0	Portland, Ore.	Mobile, Ala.	General	2,508	8,543	6,402
Vega 1	20	12.15	21	6.16	21	17.45	21	17.45	American	U. S. Navy	401.7	54.2	20.0	Mare Island, Calif.	Boston, Mass.	Navy supplies	2,755	...	...
Teno	20	20.30	21	6.48	21	17.05	21	18.15	Chilean	Cia. Sud. Amer. de Vap.	421.8	56.0	25.0	Talcahuano, Chile	New York, N. Y.	General	2,720	7,704	4,672
K. R.	20	20.30	21	6.48	21	17.05	21	18.15	Chilean	Cia. Sud. Amer. de Vap.	421.8	56.0	25.0	Talcahuano, Chile	New York, N. Y.	General	2,720	7,704	4,672
Kingsbury 1	21	4.19	21	7.16	21	18.40	21	18.40	American	Standard Oil Co. of Cal.	440.0	58.2	29.0	Los Angeles, Calif.	Panama, N. J.	Gasoline	9,350	9,033	5,985
Democracy 1	21	2.30	21	8.41	21	19.30	21	19.30	American	Charles Nelson & Co.	377.0	52.0	25.0	Seattle, Wash.	Boston, Mass.	Lumber, general	6,000	5,434	3,969
Lochgoil 1	21	6.00	21	9.09	21	20.50	22	1.55	British	Royal Mail S. P. Co.	485.6	62.3	29.4	Vancouver, B. C.	Rotterdam, Holl'd.	General	9,130	10,803	7,606

* For orders.

** Motor ship.

** Submarine.

* Tanker.

Ship	Date	From	Line	Arrivals	Departures	Remarks
Atlantic Sun	21	0 20 21	21 25 21	21 25 21	21 25 21	Gasoline
Acme	21	8 45 21	22 05 21	22 05 21	22 05 21	Light distillate
Empire Arrow	21	13 32 21	23 00 21	23 00 21	23 00 21	Gasoline
Kwansi	21	16 35 21	23 00 22	23 00 22	23 00 22	General
Maru	21	17 36 22	23 00 22	23 00 22	23 00 22	General
Santa	21	14 35 21	21 56 22	22 05 22	22 05 22	Raw sugar, gen.
Veronica	22	00 05 22	6 43 22	14 55 22	14 55 22	Wheat
Glenn	22	9 50 22	10 45 22	20 15 22	20 15 22	Lumber
Guldborg	22	3 30 22	11 27 22	21 20 23	21 20 23	Bridgeport, Conn.
Tai Yin	22	8 50 22	12 37 22	23 08 23	9 12 23	Boston, Mass.
Planet	22	12 00 22	13 04 22	23 08 23	14 30 23	Hamburg, Germany
Bennachui	22	12 00 22	13 04 22	23 08 23	14 30 23	General
Turkmen	22	12 00 22	13 04 22	23 08 23	14 30 23	General
Sea Thrush	23	00 43 23	6 58 23	15 30 23	15 30 23	General
Caucas	23	1 40 23	6 58 23	15 30 23	15 30 23	Lumber, general
Nebraska	23	1 34 23	7 27 23	16 25 23	16 25 23	General
Amsterdam	23	9 00 23	8 23 23	18 24 24	20 00 24	General
Cyprus	23	8 00 23	8 23 23	17 20 23	20 15 24	Nitrates, general
Namatawry	23	9 15 23	10 19 23	21 15 23	20 15 24	Ballast
Seminole	23	24 00 23	12 56 23	21 15 24	7 15 25	Dark gas oil
Tutor Star	23	14 00 23	14 10 24	00 15 24	9 45 25	Gasoline
Chattanooga	23	18 15 23	19 00 24	4 00 24	7 00 25	Frozen, general
City	23	18 15 23	19 00 24	4 00 24	7 00 25	Frozen, general
Remuera	23	18 00 24	6 35 24	14 25 24	14 25 25	General
Santa Teresa	23	18 30 24	6 34 24	13 15 24	21 25 25	General
Noss King	24	2 25 24	7 15 24	20 05 24	21 25 25	Beans, nitrates
Oreoma	24	1 30 24	8 09 24	16 20 24	18 15 25	General
San Rafael	24	3 30 24	9 29 24	16 40 24	20 40 25	Lumber, general
Swan	24	9 31 24	19 45 24	27 00 25	27 00 25	Ballast
Delight	24	11 30 24	12 28 24	21 45 24	21 45 25	General
Negada	24	14 30 24	16 10 25	3 10 25	13 30 25	General
Cambrai	24	16 05 24	16 55 25	1 30 25	13 45 25	Nitrates
Canada	24	11 40 24	17 25 25	14 55 25	14 55 25	War Dept. gen.
Yacht	24	11 40 24	17 25 25	14 55 25	14 55 25	Crude oil

* Tanker.

** Yacht.

** Reg.

** Coffee, hides, and general.

** Wheat, lumber, and general.

** All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

** Lumber, paper, and pulp.

** Wool, cotton, copper, tin, etc.

** Frozen, general.

** Beans, nitrates.

** Lumber, general.

** Ballast.

** General.

** Nitrates.

** War Dept. gen.

** Crude oil.

** Frozen, general.

** Beans, nitrates.

** Lumber, general.

** Ballast.

** General.

** Nitrates.

** War Dept. gen.

** Crude oil.

PORT OF CRISTOBAL.

Ship	Date	Vessel	Line	Arrivals	Departures	Remarks
United Fruit Co.	January 18	United Fruit Co.	United Fruit Co.	United Fruit Co.	United Fruit Co.	New York via waypts.
Svein	January 19	Svein	Svein	Svein	Svein	Philadelphia and waypts.
Kungsholm	January 19	Kungsholm	Kungsholm	Kungsholm	Kungsholm	San Salvador and waypts.
San Antonio	January 19	San Antonio	San Antonio	San Antonio	San Antonio	Miami via waypts.
Darion C-35	January 19	Darion C-35	Darion C-35	Darion C-35	Darion C-35	New York via Habana.
Costarica	January 20	Costarica	Costarica	Costarica	Costarica	New York via Haiti.
Magdalena	January 20	Magdalena	Magdalena	Magdalena	Magdalena	New Orleans and waypts.
Pellerin de la Touche	January 20	Pellerin de la Touche	Pellerin de la Touche	Pellerin de la Touche	Pellerin de la Touche	New Orleans and waypts.

** Air mail carrier.

* Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 20...	No. 305-N ²¹ .	Pan American-Grace Airways...	Talara via wayports.	January 19...	August Thyssen...	Aluminium Line...	Georgetown and waypts.
January 21...	Saxaula...	United Fruit Co.	New York via Kingston.	January 19...	Kingsholm...	Swedish-American Line...	New York via waypts.
January 21...	Calamares...	United Fruit Co.	Colombia in port.	January 20...	No. 145-M ²¹ .	Pan American Airways...	Maracaibo via wayports.
January 21...	Fiona...	United Fruit Co.	New York via wayports.	January 20...	Magdalena...	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
January 21...	Inapaquina ²⁴ .	United Fruit Co.	New Orleans, La.	January 20...	No. 9654 ²¹ .	Hamburg-American Line...	Port Limon, Costa Rica.
January 18...	Lt. Col. H. C.	A. Tagaropolos...	Colon, Rep. of Panama.	January 21...	No. 669-M ²¹ .	Pan American Airways...	San Salvador and waypts.
January 21...	Schumm ²⁵ .	U. S. Army...	Fort Monroe, Va.	January 21...	Inapaquina ²⁴ .	A. Tagaropolos...	Miami via wayports.
January 21...	No. 670-M ²¹ .	Pan American Airways...	Miami via wayports.	January 21...	Saxaula...	United Fruit Co.	Colon, Rep. of Panama.
January 21...	No. 9670 ²¹ .	Pan American Airways...	San Salvador and waypts.	January 21...	Irona...	United Fruit Co.	New York via Kingston.
January 22...	No. 145-M ²¹ .	Pan American Airways...	Maracaibo via wayports.	January 22...	No. 144-M ²¹ .	Pan American Airways...	Port Limon, Costa Rica.
January 23...	La Emperatriz ²⁶ .	George Rivers...	Bluefields, Nicaragua.	January 22...	Zacapa...	Pan American Airways...	La Guayra via wayports.
January 23...	Bolivar...	Standard Fruit & S. S. Co.	New Orleans via Habana.	January 22...	Calamares...	United Fruit Co.	Port Limon, Costa Rica.
January 23...	Magdalena...	Colombia S. S. Line...	New Orleans via wayports.	January 22...	Pellerin de la Touche...	French Line...	Have via wayports.
January 23...	Irona...	United Fruit Co.	Port Limon, Costa Rica.	January 23...	No. 9685 ²¹ .	Pan American Airways...	San Salvador and waypts.
January 24...	Costarica...	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	January 23...	Darien C-35 ²¹ .	Sadta Airplane Co.	Cartagena & Baranquilla.
January 24...	No. 144-M ²¹ .	Pan American Airways...	La Guayra via wayports.	January 24...	Irona...	United Fruit Co.	New Orleans and waypts.
January 24...	No. 668-M ²¹ .	Pan American Airways...	Miami via wayports.	January 24...	Bolivar...	Colombia S. S. Line...	New York via wayports.
January 24...	No. 945-M ²¹ .	Pan American-Grace Airways...	Talara via wayports.	January 24...	Anetida...	Standard Fruit & S. S. Co.	New Orleans and waypts.
January 24...	No. 9654 ²¹ .	Pan American Airways...	San Salvador and waypts.	January 24...	La Emperatriz ²⁶ .	A. Tagaropolos...	Colon, Rep. of Panama.
January 24...	Annetta I. ²⁴ .	United Fruit Co.	New Orleans and Habana.	January 24...		George Rivers...	Bluefields, Nicaragua.
January 24...		A. Tagaropolos...	Colon, Rep. of Panama.				
²³ Air mail carrier. ²⁴ Motor boat. ²⁵ Tug. ²⁶ Motor schooner.				PORT OF BALBOA.			
January 21...	White Shadow ^{27 28} .	E. H. Norton.	Pearl Islands, R. P.	January 22...	White Shadow ^{27 28} .	E. H. Norton.	Guayaquil, Ecuador.
January 22...	Santa...	General Petroleum Co.	Los Angeles, Calif.	January 24...	Santa...	General Petroleum Co.	Los Angeles, Calif.
January 23...	Bertha ²⁹ .	Hans Elliot.	Panama Bay, R. P.	January 24...	Bertha ²⁹ .	Hans Elliot.	Panama Bay, R. P.
January 23...	Bertha ²⁹ .	Hans Elliot.	Panama Bay, R. P.	January 24...	Bertha ²⁹ .	Hans Elliot.	Panama Bay, R. P.
January 23...	El Libertador ²⁹ .	A. Valdez.	Panama Bay, R. P.	January 24...	El Libertador ²⁹ .	A. Valdez.	Panama Bay, R. P.
January 23...	Dos Hermanos ²⁹ .	Hans Elliot.	Panama Bay, R. P.	January 24...	Dos Hermanos ²⁹ .	Hans Elliot.	Panama Bay, R. P.
January 24...	Nueva Panama ²⁹ .	Hans Elliot.	Panama Bay, R. P.	January 24...	Nueva Panama ²⁹ .	Hans Elliot.	Panama Bay, R. P.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 4, 1931. No. 27.

Canal Traffic During January.

During the month of January, 1931, 476 commercial vessels and 3 small launches transited the Canal. Tolls on the commercial vessels aggregated \$2,108,140.42, and on the launches \$16.77, or a total tolls collection of \$2,108,157.19.

The daily average of commercial vessels was 15.35, and the average tolls collection was \$68,004.53, as compared with an average of 15.97 transits and \$70,728.51 in tolls for the previous month, and an average of 17.13 transits and \$76,135.84 in tolls for January, 1930. The average amount of tolls paid by each of the commercial transits was \$4,428.87, as compared with \$4,429.46 for the month of December, 1930. Last month's traffic was the lowest January traffic since January, 1927, when 443 commercial vessels, paying \$1,984,760.71 in tolls, were passed through the Canal.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 7 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 7 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,283,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
Total, first 7 months of fiscal year, 1931.....	3,378	15,005,909.53	15.71	69,794.93
Total, first 7 months of fiscal year, 1930.....	3,733	16,188,845.40	17.36	75,296.95
Total, first 7 months of fiscal year, 1929.....	3,788	15,866,110.35	17.62	73,795.86

In comparison with the first 7 months of the fiscal year 1930, the corresponding period this year has had 355 fewer transits and \$1,182,935.87 less tolls, decreases of 9.5 per cent and 7.3 per cent respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 24, 1931.

No. 836.

Colombia, Cartagena Approach, Fort San Fernando Light again regular. The following is quoted from Notice to Mariners No. 3, Washington, D. C., dated January 17, 1931:

The second officer of the Danzig steamer *Niobe* reports that on December 23, 1930, Fort San Fernando Light was observed to be functioning regularly as indicated in the light list.

Approximate position: Lat. 10° 19' 18" N., long. 75° 34' 00" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, January 31, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Colombo.....	24	6.35	25	6.00	25	13.37	25	14.39	513.0	64.0	28.8	Genoa, Italy.....	Valparaiso, Chile.	General.....	1,599	12,533	7,516
Baidas.....	16	13.35	23	5.55	25	13.37	25	16.57	316.8	51.1	8.10	Cristobal, C. Z.....	Buenaventura, Col.	General.....	153	211	124
Boussle.....	24	13.45	23	6.45	25	14.20	25	15.30	366.0	22.0	22.4	Dunkirk, France.....	Noumea, New Cal.	General.....	3,596	5,504	3,681
Tashoo.....	24	16.40	23	7.35	25	15.49	25	16.50	378.0	46.2	16.0	Philadelphia, Pa.....	Seattle, Wash.	General.....	1,400	3,954	2,628
Toklen.....	24	21.00	23	7.40	25	15.52	25	15.50	378.0	54.0	14.0	Boston, Mass.....	Los Angeles, Calif.	Ballast.....	6,225	4,535	
Columbian.....	24	21.00	23	9.35	25	15.52	25	18.25	404.0	53.0	16.0	New York, N. Y.....	Portland, Ore.	General.....	1,780	6,760	4,451
Call.....	19	3.35	23	10.30	25	17.51	25	19.03	216.0	32.0	12.5	Cristobal, C. Z.....	Guayaquil, Ecuador	General.....	240	1,105	693
Carlier.....	24	12.35	25	14.25	26	17.51	25	19.03	471.0	68.0	17.0	Antwerp, Belgium.....	Seattle, Wash.	Ballast.....	9	264	7,044
Lebore.....	24	12.35	25	14.25	26	17.51	25	19.03	471.0	68.0	17.0	Antwerp, Belgium.....	Cruz Grande, Chile	Ballast.....	11	325	4,635
Riverton.....	25	13.55	26	1.45	26	10.37	26	10.37	549.0	72.0	23.6	Baltimore, Md.....	Vancouver, B. C.....	Ballast.....	1,142	3,953	2,570
Nosa Prince.....	25	17.05	26	3.04	26	11.12	26	11.12	410.0	54.0	17.0	Tyne, England.....	Talcahuano, Chile.	General.....	1,142	3,953	2,570
Ferret.....	25	20.35	26	3.05	26	15.33	26	15.33	385.3	55.0	16.6	New Orleans, La.....	Victoria, B. C.....	Ballast.....	7,381	6,615	4,859
Steel Worker.....	25	23.25	26	4.49	26	15.14	26	16.12	424.2	56.2	27.0	New York, N. Y.....	Shanghai, China.....	General, steel.....	7,381	6,615	4,859
Pushnell.....	14	9.25	26	6.05	26	16.10	26	16.10	350.0	45.8		Baltimore, Md.....	Balboa, C. Z.....	Ballast.....			
S-22.....	14	9.45	26	6.25	26	16.18	26	16.18	219.3	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
S-23.....	14	9.45	26	6.25	26	16.18	26	16.18	219.3	20.8		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
Oak Branch.....	26	3.25	26	7.40	26	17.01	26	18.35	385.0	49.8	20.3	London, England.....	Corral, Chile.....	General.....	3,016	5,209	4,035
S-12.....	13	13.30	26	9.25	26	17.40	26	17.40	231.0	21.10		Cristobal, C. Z.....	Balboa, C. Z.....	Ballast.....			
Eagle No. 35.....	26	9.50	26	10.05	26	18.25	26	21.00	449.0	53.2	16.0	Hampton Rds., Va.....	Vancouver, B. C.....	Ballast.....	7,816	5,755	
San Marcos.....	26	13.50	26	22.10	27	9.04	27	10.13	410.0	51.0	18.6	Bremen, Germany.....	Seattle, Wash.	General.....	2,655	7,755	4,895
Fernwood.....	26	14.25	26	23.45	27	10.04	27	10.04	390.0	55.0	22.0	Houston, Tex.....	Yokohama, Japan.....	General, cotton.....	6,495	6,840	4,973
Halo.....	25	19.15	27	2.40	27	11.03	27	12.10	214.0	34.0	10.6	Cristobal, C. Z.....	Acajutla, Salvador.....	Ballast.....	218	2,873	1,776
Buenaventura.....	26	1.10	27	2.20	27	11.03	27	12.10	214.0	34.0	10.6	New York, N. Y.....	Guayaquil, Ecuador.....	General.....	6,351	6,953	5,210
Armada.....	26	1.10	27	2.20	27	11.03	27	12.10	214.0	34.0	10.6	New York, N. Y.....	Guayaquil, Ecuador.....	General.....	6,351	6,953	5,210
Silverbeech.....	26	16.25	27	3.50	27	15.27	27	16.15	425.6	53.0	19.0	Freeport, Tex.....	Melbourne, Aus. lia.	General, sulphur.....	2,639	8,015	5,849
Lisbon Maru.....	26	16.25	27	6.50	27	15.27	27	16.15	425.6	53.0	19.0	Chester, Pa.....	Calcutta, India.....	Ballast.....	2,639	8,015	5,849
Yonacichi.....	27	2.40	27	6.19	27	16.25	27	16.25	401.0	51.0	15.6	Baltimore, Md.....	Kobe, Japan.....	General.....	964	6,995	5,032
Illinois.....	27	4.30	27	7.55	27	16.25	27	16.25	401.0	51.0	15.6	Baltimore, Md.....	Kobe, Japan.....	General.....	964	6,995	5,032
Rolling Stone.....	27	7.35	27	8.39	27	16.25	27	16.25	416.8	56.1	18.0	Philadelphia, Pa.....	Brisbane, Australia.....	General.....	3,334	7,196	4,956
Swan.....	27	7.35	27	8.39	27	16.25	27	16.25	416.8	56.1	18.0	Philadelphia, Pa.....	Brisbane, Australia.....	General.....	3,334	7,196	4,956
Charles B.....	27	6.12	27	14.15	27	23.00	27	23.00	431.0	56.0	20.11	Hamburg, Germany.....	Valparaiso, Chile.....	General.....	4,915	8,982	6,274
Tokai Maru.....	27	15.05	28	00.45	28	9.53	28	9.53	445.0	60.5	24.2	Cristobal, C. Z.....	Shanghai, China.....	General.....	2,445	3,225	2,295
Harwood.....	27	11.10	28	2.00	28	10.10	28	10.10	320.0	45.1	17.6	Aruba, D. W. I.....	Balboa, C. Z.....	Gasoline.....	2,445	3,225	2,295
Edwin.....	28	00.45	28	3.35	28	11.41	28	12.40	410.0	54.2	17.8	New York, N. Y.....	Los Angeles, Calif.	General.....	2,775	6,603	4,932
Christenson.....	28	12.25	28	5.25	28	12.38	28	13.35	402.5	52.2	14.0	Norfolk, Va.....	Tocopilla, Chile.....	Ballast.....	5,353	4,609	
Uganda.....	28	12.25	28	5.25	28	12.38	28	13.35	402.5	52.2	14.0	Norfolk, Va.....	Tocopilla, Chile.....	Ballast.....	5,353	4,609	

* Motor ship.

* Sub-lander.

* Patrol boat.

* Yacht.

* Minesweeper.

	27	6 10	28	6 05	28	14 11	28	22 50	American	Panama Mail S. S. Co.	380 0	48 7	24 2	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,720	6,015	4,281
Colombia	28	00 50	28	6 05	28	15 01	28	15 55	American	U. S. Navy	225 0	41 0	.....	Pto. Cabezas, Nic.	Balboa, C. Z.	Ballast	.....	.....	.....
Ashville	28	7 10	28	7 25	28	15 18	28	16 10	American	Amer-Hawaiian Line	407 7	53 7	18 6	Boston, Mass.	Seattle, Wash.	General	2,220	7,156	5,094
Dakota	28	7 10	28	7 25	28	15 18	28	16 10	American	Amer-Hawaiian Line	407 7	53 7	18 6	Boston, Mass.	Seattle, Wash.	General	2,220	7,156	5,094
Herac	28	7 05	28	8 20	28	18 07	28	16 35	American	Ore S. S. Corp.	445 0	58 0	19 6	Boston, Mass.	Seattle, Wash.	General	3,138	8,669	6,363
Luckenbach	28	5 10	28	10 25	28	18 57	28	19 10	Swedish	One S. S. Corp.	561 0	72 0	23 0	New York, N. Y.	Cruz Grande, Chile	Ballast	15,560	4,493	.....
Amerikaland	28	21 05	28	14 10	28	15 15	28	22 20	British	Donaldson Brothers	425 0	56 0	17 0	Glasgow, Scotland	Vancouver, B. C.	Gen., bananas	837	7,827	5,429
Saluria	28	18 00	29	2 03	29	9 47	29	11 03	American	Dixon S. S. Corp.	390 0	54 0	19 0	Philadelphia, Pa.	Seattle, Wash.	General	3,000	6,162	4,433
Willmoto	28	18 00	29	2 03	29	9 47	29	11 03	American	Dixon S. S. Corp.	390 0	54 0	19 0	Philadelphia, Pa.	Seattle, Wash.	General	3,000	6,162	4,433
Theodore	28	23 45	29	4 05	29	11 50	29	12 55	Norwegian	Fred Olsen & Co.	425 5	55 2	27 2	Antwerp, Belgium	Vancouver, B. C.	General	6,135	7,593	5,637
Roosevelt	28	4 20	29	6 40	29	13 20	29	14 15	American	Argonaut S. S. Line	410 5	54 3	21 0	Baltimore, Md.	Vancouver, B. C.	General, steel	5,576	6,567	4,917
Atlantic	29	00 25	29	6 40	29	14 10	29	15 15	American	The Texas Co.	425 0	56 0	21 0	New York, N. Y.	Los Angeles, Calif	Ballast	7,638	5,305	.....
Dunannon	29	00 25	29	6 40	29	14 10	29	15 15	American	The Texas Co.	425 0	56 0	21 0	New York, N. Y.	Los Angeles, Calif	Ballast	7,638	5,305	.....
Peter Kerr	29	6 25	29	7 20	29	15 08	29	16 05	American	States S. S. Co.	415 0	56 0	19 0	Manchester, Eng.	Vancouver, B. C.	General	2,553	7,701	5,696
Saint Joseph	29	14 55	29	11 10	29	18 14	29	19 30	French	French Line	398 0	50 3	18 0	Provence, France	Valparaiso, Chile	General	1,812	6,025	4,187
Henry D.	29	00 30	30	0 20	30	9 28	30	10 36	American	Union Sulphur Co.	356 0	51 8	25 0	Providence, R. I.	Seattle, Wash.	Sulphur	5,582	5,367	2,900
Whiton	29	20 30	30	2 15	30	10 36	30	11 28	American	Shepard S. S. Co.	409 8	54 2	24 0	Philadelphia, Pa.	Seattle, Wash.	General	2,836	6,602	4,754
Sage Brush	30	3 55	30	4 30	30	13 57	30	14 50	Japanese	Kokusai Kisen Kaisha	385 0	51 0	19 0	St. Johns, N. B.	Shanghai, China	Cotton, wheat	4,783	5,919	4,389
Kinku Maru	30	3 55	30	4 30	30	13 57	30	14 50	Japanese	Kokusai Kisen Kaisha	385 0	51 0	19 0	St. Johns, N. B.	Shanghai, China	Cotton, wheat	4,783	5,919	4,389
Hansa	30	2 05	30	5 40	30	14 58	30	15 55	German	Anzlo-Saxon Pet. Co.	413 1	52 2	15 3	Hamburg, Germany	Los Angeles, Calif	Ballast	6,185	4,169	.....
Indra	30	5 05	30	6 25	30	16 25	30	17 30	British	DuPont & Co.	402 0	52 6	18 0	Norfolk, Va.	Topepili, Chile	Ballast	5,634	4,172	.....
Eagle No 58	18	13 30	30	6 45	30	17 27	30	18 30	American	U. S. Navy	200 0	25 6	.....	Hampton Rds., Va.	Balboa, C. Z.	Ballast	6,872	7,611	5,450
Bessmer City	30	7 45	30	8 50	30	17 40	30	19 00	American	Isthmian S. S. Lines	424 0	56 0	24 0	Mobile, Ala.	Honolulu, T. H.	Steel products	6,890	18,262	13,500
Rangitatu	30	8 15	30	8 50	30	18 50	30	19 30	British	N. Z. Shipping Co.	531 0	70 0	29 6	London, England	Auckland, N. Z.	General	117	262	161
Caucha	30	10 55	30	10 40	30	18 52	30	21 50	Colombian	National Navigation Co.	107 0	22 0	9 3	Cristobal, C. Z.	Buenaventura, Col.	General	3,875	9,257	6,831
Satide	30	14 05	31	1 25	31	9 20	31	11 57	German	Hamburg-American Line	461 0	61 8	21 6	Hamburg, Germany	Champerio, Guat.	General	1,889	3,250	2,292
Syria	30	16 05	31	1 55	31	11 49	31	12 20	German	Hamburg-American Line	370 0	53 0	20 5	New York, N. Y.	Valparaiso, Chile	General	1,624	6,255	4,016
Santa Inez	30	14 40	31	6 00	31	13 26	31	14 25	Chilean	Cia Sud. Amer. de Vap.	370 0	53 0	20 5	New York, N. Y.	Valparaiso, Chile	General	1,904	7,384	5,459
Toten	30	14 40	31	6 00	31	13 26	31	14 25	Chilean	Cia Sud. Amer. de Vap.	370 0	53 0	20 5	New York, N. Y.	Valparaiso, Chile	General	1,904	7,384	5,459
Australand	30	19 15	31	6 10	31	14 45	31	16 00	British	Amer-Australian Line	410 4	54 0	24 10	Freight, Texas	Brisbane, Australia	General, sulphur	6,750	6,903	5,155
Scota	30	19 15	31	6 10	31	14 45	31	16 00	British	Amer-Australian Line	410 4	54 0	24 10	Freight, Texas	Brisbane, Australia	General, sulphur	6,750	6,903	5,155
Cerro	17	16 55	21	8 25	21	15 19	21	17 35	German	Hamburg-American Line	237 0	34 4	13 4	Cristobal, C. Z.	Balboa, C. Z.	Towing barge	167	1,572	1,011
San Jose	27	14 15	31	8 40	31	16 33	31	18 50	American	United Fruit Co.	330 0	45 0	18 0	Cristobal, C. Z.	Guantanamo, Cuba	General	326	3,675	2,359
Acapulco	27	14 15	31	8 40	31	16 33	31	18 50	American	United Fruit Co.	330 0	45 0	18 0	Cristobal, C. Z.	Guantanamo, Cuba	General	326	3,675	2,359
Pacific Trader	31	12 12	31	13 30	31	21 25	31	23 45	British	Pacific Fruit Co.	216 0	33 0	13 6	Cristobal, C. Z.	Champerio, Guat.	General	293	7,273	7,700
	31	12 12	31	13 30	31	21 25	31	23 45	British	Furness, Withy & Co.	420 0	58 0	18 0	Glasgow, Scotland	Vancouver, B. C.	General	591	7,793	5,916

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	24	21 00	25	6 08	25	15 30	25	15 30	American	Tidewater Oil Co.	430 0	59 2	25 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,543	7,629	5,325
David McKelvy	24	21 00	25	6 08	25	15 30	25	15 30	American	Tidewater Oil Co.	430 0	59 2	25 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,543	7,629	5,325
Forbes	24	21 00	25	6 08	25	15 30	25	15 30	American	Tidewater Oil Co.	430 0	59 2	25 0	Los Angeles, Calif.	New York, N. Y.	Gasoline	8,543	7,629	5,325
Hauptman	25	7 30	25	6 38	25	18 45	25	18 45	American	Munson, McKelvy & Co.	409 8	54 2	30 0	St. Helens, Oreg.	Baltimore, Md.	Lumber, general	8,530	6,831	4,969
Heilo	25	7 30	25	6 38	25	18 45	25	18 45	American	Munson, McKelvy & Co.	409 8	54 2	30 0	St. Helens, Oreg.	Baltimore, Md.	Lumber, general	8,530	6,831	4,969
Petrolina	25	13 00	26	6 15	26	14 35	26	16 10	Norwegian	Cureaco Petrol-Ind. Co.	427 0	53 3	24 0	Champerio, Guat.	Cristobal, C. Z.	Gasoline	1,246	1,158	722
Karamea	25	13 00	26	6 15	26	14 35	26	16 10	Norwegian	Cureaco Petrol-Ind. Co.	427 0	53 3	24 0	Champerio, Guat.	Cristobal, C. Z.	Gasoline	1,246	1,158	722
Donau	25	21 30	26	7 04	26	16 45	26	17 35	German	North German Lloyd	382 8	63 2	26 0	Townsville, Auslin.	Cureaco, D. W. I.	General	6,974	6,319	4,373
Skranstad	25	21 30	26	7 04	26	16 45	26	17 35	German	North German Lloyd	382 8	63 2	26 0	Townsville, Auslin.	Cureaco, D. W. I.	General	6,974	6,319	4,373
Netheroy	26	2 00	26	8 01	26	17 20	26	17 20	Norwegian	Fern Line	327 7	53 4	26 3	Vald'ou, U.S.S.R.	Bremen, Germany	General	9,885	11,007	7,636
Christenson	26	3 30	26	9 09	26	18 35	27	00 15	British	Royal Mail S. P. Co.	450 2	58 3	25 2	Vancouver, B. C.	Copenhagen, Den.	Soya beans	7,100	6,082	4,236
	26	3 30	26	9 09	26	18 35	27	00 15	British	Royal Mail S. P. Co.	450 2	58 3	25 2	Vancouver, B. C.	Copenhagen, Den.	Soya beans	7,100	6,082	4,236
	26	4 30	26	10 17	27	13 30	27	13 30	American	Arrow Line	410 5	54 3	24 4	Everett, Wash.	Antwerp, Belgium	General	5,840	8,874	6,558
	26	4 30	26	10 17	27	13 30	27	13 30	American	Arrow Line	410 5	54 3	24 4	Everett, Wash.	Antwerp, Belgium	General	5,840	8,874	6,558

* Frozen, general, and wool.

* Coffee, hides, and dyewoods.

* Motor ship.

* Tanker.

Barwhin.....	30	00.30	30	18.25	30	18.25	British.	Chilean Nitrate Assn.	405.5	55.7	24.1	Tocopilla, Chile.	Azores ¹⁶	Nitrates.....	8,350	6,881	4,845
Buchaness.....	30	2.30	30	9.51	30	19.15	British.	Sir W. R. Smith & Sons.	251.0	43.6	24.3	Honolulu, T. H.	Avonmouth, Eng.	General.....	7,084	9,656	4,954
Guayaquil.....	30	4.30	30	10.12	30	20.30	American.	Panama R. R. S. Line.....	401.0	54.3	18.0	Guayaquil, Ecuador	New York, N. Y.	General.....	1,750	2,874	1,944
Charles E.																	
Arizona.....	30	8.00	30	10.40	30	20.30	American.	Pan-Am. Pet. & Tr. Co.	329.0	45.1	13.4	Balboa, C. Z.	Curacao, D. W. I.	Ballast.....	3,225	2,235	
Albion Star.....	30	10.00	30	13.16	30	22.25	British.	Amer.-Hawaland Line.....	434.3	57.7	25.2	Seattle, Wash.	Boston, Mass.	Lumber-general.....	7,383	7,953	5,916
Bokura.....	30	13.10	30	14.33	30	23.30	British.	N. Z. Shipping Co.	526.4	61.4	23.0	N. Westminster, B. C.	London, England.....	General.....	4,827	8,317	5,531
Hendonhall.....	30	13.30	30	15.34	31	00.35	British.	Inter. Freightng Corp.	399.6	53.0	26.0	Lytleton, N. Z.	London, England.....	Frozen, general.....	5,827	12,846	9,439
Barneveld.....	30	17.35	30	18.23	31	2.19	Dutch.	Royal Neth. S. S. Co.	400.9	58.2	23.0	Coral, Chile.	Norfolk, Va.	Nitrates.....	8,130	8,852	4,112
Hindanger.....	30	18.45	30	19.50	31	5.55	Norwegian.	Interocean S. S. Corp.	398.0	54.7	26.0	N. Westminster, E. C.	Hamburg, Germany.....	General.....	5,269	7,820	5,980
Boliver.....	30	21.55	31	6.10	31	14.45	Belgian.	Cie. Martime Belge.....	400.2	52.0	25.0	N. Westminster, B. C.	Rotterdam, Holland.....	(26).....	6,995	6,854	5,287
Queen Maud.....	30	21.59	31	7.09	31	15.45	Belgian.	DuPont de Nemours.....	400.2	52.3	25.0	Vancouver, B. C.	Antwerp, Belgium.....	General.....	7,250	5,332	4,020
Sarantes.....	30	23.00	31	7.31	31	18.15	Spanish.	Salitros, London.....	361.1	50.3	22.0	Tocopilla, Chile.	Baltimore, Md.	Nitrate of soda.....	7,550	5,213	3,955
Volunteer.....	31	1.58	31	8.25	31	20.10	American.	Tampa Intercoast. Co.	410.0	56.0	28.0	Pisano, P. I.	New Orleans, La.	Nitrate of soda.....	5,830	4,052	3,082
Cid.....	31	5.00	31	8.29	31	19.10	British.	Pacific Steam Nav. Co.	264.8	41.2	14.0	Guayaquil, Ecuador	New York, N. Y.	(27).....	158	2,371	1,626
Fluence.....																	
Luckenbach.....	31	11.15	31	11.57	31	20.50	American.	Luckenbach Line.....	401.8	52.2	20.0	Los Angeles, Calif.	New Orleans, La.	General.....	3,161	5,643	4,621
Sveti Vlaho.....	31	11.20	31	12.27	31	21.45	Yugoslav.	Baburiza & Co.	423.5	56.0	25.3	Tocopilla, Chile.....	Charleston, S. C.	Nitrates.....	9,350	6,539	4,700

¹⁶ Wheat, lumber, and general.

²² Cocoa, coffee, hats, and rice.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmidnight.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 25. . .	Duchess of Bedford.	Canadian-Pacific Line.	New York via wayports.	January 25. . .	No. 9670 ²¹ .	Pan American Airways.	San Salvador and waypts.
January 25. . .	Calamares.	United Fruit Co.	Port Limon, Costa Rica.	January 25. . .	No. 669-M ²¹ .	Pan American Airways.	Miami via wayports.
January 26. . .	Darien C-35 ²¹ .	Seadta Airplane Co.	Barranquilla and waypts.	January 25. . .	Costaria.	Royal Netherlands S. S. Co.	Amsterdam and waypts.
January 26. . .	No. 9685 ²² .	Pan American Airways.	San Salvador and waypts.	January 25. . .	Calamares.	United Fruit Co.	New York via Habana.
January 27. . .	Austvangel.	Aluminum Line.	San Salvador and waypts.	January 25. . .	Cartago.	United Fruit Co.	New Orleans and waypts.
January 27. . .	No. 306-N ²³ .	Pan American-Grace Airways.	Talara via wayports.	January 26. . .	Magdalena.	Hamburg-American Line.	Hamburg via wayports.
January 27. . .	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.	January 26. . .	Duchess of Bedford.	Canadian-Pacific Line.	New York via wayports.
January 28. . .	Carare.	Elders & Fyfes Line.	Avonmouth via waypts.	January 26. . .	Agalta ²² .	R. Feuillebois.	Colon, Rep. of Panama.
January 28. . .	Tolosa.	United Fruit Co.	New York via Kingston.	January 28. . .	Inapauqua ²⁴ .	Aluminum Line.	Colon, Rep. of Panama.
January 28. . .	Santa Marta.	United Fruit Co.	New Orleans, La.	January 28. . .	Austvangel.	Pan American Airways.	Maracaibo via Cartagena.
January 28. . .	Tela.	A. Tagaropolos.	Colon, Rep. of Panama.	January 28. . .	No. 9664 ²³ .	Pan American Airways.	San Salvador and waypts.
January 28. . .	Inapauqua ²⁴ .	Standard Oil Co.	Beaumont, Tex.	January 29. . .	No. 668-M ²¹ .	Pan American Airways.	Miami via wayports.
January 28. . .	Tamaba.	Pan American Airways.	Miami via wayports.	January 29. . .	Carare.	Elders & Fyfes Line.	Avonmouth via wayports.
January 29. . .	No. 669-M ²³ .	Pan American Airways.	San Salvador and waypts.	January 29. . .	Tela.	United Fruit Co.	Bocas, Rep. of Panama.
January 29. . .	No. 9670 ²³ .	Pan American Airways.	New York via wayports.	January 29. . .	No. 144-M ²³ .	Pan American Airways.	La Guayra via wayports.
January 30. . .	Volendam.	Holland-America Line.	New York via wayports.	January 29. . .	Santa Marta.	United Fruit Co.	New York via wayports.
January 30. . .	Anapulu.	Standard Fruit & S. S. Co.	New Orleans and Habana.	January 29. . .	Tolosa.	United Fruit Co.	Port Limon, Costa Rica.
January 30. . .	Buraco.	Colombian S. S. Line.	New York via wayports.	January 29. . .	Tamaba.	Standard Oil Co.	Tampico, Mexico.
January 30. . .	Perl Marie ²⁵ .	G. I. Bryan.	Colon, Rep. of Panama.	January 30. . .	No. 9685 ²³ .	Pan American Airways.	San Salvador and waypts.
January 30. . .	Tela.	United Fruit Co.	Bocas, Rep. of Panama.	January 30. . .	Darien C-35 ²³ .	Seadta Airplane Co.	Barranquilla and waypts.
January 31. . .	No. 144-M ²³ .	Pan American Airways.	La Guayra via wayports.	January 31. . .	Tela.	United Fruit Co.	New Orleans and waypts.

²³ Air mail carrier.

²⁴ Motor boat.

²⁵ Motor schooner.

²⁶ Schooner.

* Other than ships passing through the Canal.

(Continued on page 392, column 2.)

Summary of Passenger Movement at the Canal During 1930.

During the calendar year 1930 the number of passengers disembarking at Canal Zone ports in termination of voyage aggregated 41,423, and the number embarking, or beginning a voyage, during the same period totaled 39,330. Approximately 55 per cent of both the arrivals and departures were carried as first class, and the remainder either as second, tourist, third, or steerage. These figures do not include passengers merely calling at the Canal, that is, arriving and departing on the same ship.

The following tabulation shows by months, the number of passengers disembarking and embarking at Canal Zone ports during the calendar year 1930, segregated as between first class and "others," with comparative totals for the calendar years 1929 and 1928:

	Disembarking.			Embarking.		
	First class.	Others.	Total.	First class.	Others.	Total.
January.....	2,154	1,334	3,488	1,638	1,280	2,918
February.....	2,006	1,644	3,650	1,742	1,120	2,862
March.....	1,985	1,980	3,965	2,204	1,753	4,017
April.....	1,833	2,297	4,130	1,889	1,423	3,312
May.....	1,596	1,121	2,717	2,231	1,537	3,768
June.....	1,906	1,468	3,374	2,116	1,620	3,736
July.....	2,017	1,417	3,434	2,049	1,363	3,412
August.....	1,842	1,741	3,583	1,956	1,787	3,743
September.....	1,959	1,509	3,468	1,640	1,605	3,245
October.....	1,980	1,539	3,519	1,409	1,700	3,109
November.....	1,550	1,164	2,714	1,318	1,524	2,842
December.....	1,923	1,458	3,381	1,228	1,138	2,366
Total, 1930.....	22,751	18,672	41,423	21,480	17,850	39,330
Total, 1929.....	25,736	20,597	46,333	25,677	18,982	44,659
Total, 1928.....	25,405	18,711	44,116	23,768	16,926	40,694

As compared with 1929, the calendar year 1930 shows a 10.6 per cent decrease in the total number of arrivals and a decrease of 11.9 per cent in the total number of departures.

During the past 3 calendar years approximately 75 per cent of the passenger movement to and from the Canal has been through the port of Cristobal as may be seen from the following tabulation in which the totals are given for the years 1928, 1929, and 1930:

	Port of Cristobal.			Port of Balboa.		
	1928.	1929.	1930.	1928.	1929.	1930.
Passengers disembarking.....	32,535	35,053	30,167	11,581	11,280	11,256
Passengers embarking.....	30,342	34,434	28,886	10,352	10,225	10,444

A further segregation of the passenger movement shows that 31,699 incoming and 28,582 outgoing passengers were brought from and were destined to ports on the Atlantic, and 9,724 incoming and 10,748 outgoing passengers were brought from and were destined to ports on the Pacific.

TRANSIENT VISITORS.

In addition to the figures shown above of passengers embarking and disembarking, there were 209,527 passengers (115,089 at Cristobal and 94,438 at Balboa) brought to the Isthmus by vessels calling at Canal Zone ports during 1930. For the calendar year 1929, this number was 207,970. Most of these passengers came ashore for a period of from

24 to 48 hours, but as they departed on the same vessel on which they arrived, they are not taken up in the above tabulation. This group of 209,527 passengers is segregated as follows:

	Calendar year 1930.			Total.	
	Cristobal.	Balboa.	Total.	1929.	1928.
Remaining on board vessels transiting Canal.....	89,927	90,963	180,890	180,766	149,570
Remaining on board vessels entering port, but not transiting Canal.....	25,162	3,475	28,637	27,204	23,745
Total.....	115,089	94,438	209,527	207,970	173,315

Segregating those remaining on board vessels transiting the Canal according to direction of transit for the 3 calendar years shows the following:

	Calendar year.		
	1928.	1929.	1930.
En route from Atlantic to Pacific ports.....	86,399	104,723	103,083
En route from Pacific to Atlantic ports.....	63,171	76,043	77,807

The above represents the strictly passenger traffic passing through the Canal and to and from Canal Zone ports. To get the total number of arrivals and departures of individuals at Canal Zone ports during the year, it would be necessary to add the crews of 5,885 commercial vessels and 583 noncommercial vessels which transited the Canal during the year, as well as 1,023 vessels calling at the ports of Cristobal and Balboa during the year without transiting the Canal. In the aggregate the combined crews would considerably outnumber the passengers though, owing to the fact that many of the vessels made a number of calls, there would be considerable duplication in so far as the number of individuals was concerned in any figures compiled relative to crews.

Contract Awarded for Construction of New Panama Mail Vessels.

The Grace Steamship Company has announced that a contract for the construction of 4 twin-screw combination mail, passenger and cargo steamers for its Panama Mail Steamship Line's coast-to-coast service has been awarded to the Federal Shipbuilding & Drydock Company, for immediate construction at its plant at Kearney, N. J.

The new vessels are to be turbo-electric drive, of 9,000 gross tons, 16,600 tons displacement, 508 feet long, 72 feet beam, and 39 feet deep. They are to have a speed of 19 knots. Accommodations are to be provided for 222 first-class and 64 third-class passengers.

Among the special features of the new vessels is a promenade deck devoted exclusively to public accommodation, including dining room; on the promenade deck aft is to be an open-air "night club" with dance floor. The promenade will overlook an open-air sports deck connected with a gymnasium; in the middle of the sports deck will be a permanent swimming pool, 36 feet long, illuminated from the bottom.

The new vessels will replace the ships in the company's service between New York, Habana, Puerto Colombia, Cartagena, Cristobal, Balboa, west coast Central American ports, Mazatlan, Los Angeles, and San Francisco. The vessels at present engaged in the service are the *Colombia*, *Venezuela*, *Ecuador*, *El Salvador*, and *Guatemala*. Deliveries of the new ships are scheduled for 20, 22, 24, and 27 months.

Supplement No. 3—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., January 27, 1931.

ITEM 42.—STORAGE AND CAR DEMURRAGE.

(Effective February 15, 1931.)

STORAGE.

1. Storage charges will be made on shipments remaining at the stations of origin or destination longer than 72 hours after notice of arrival, at the following rates:
 - (a) Freight, per 100 pounds per day of 24 hours, or fraction thereof. \$0.03
(minimum charge \$0.25)
 - (b) Express and baggage, per package per week, or fraction thereof. 25
2. Free time will begin the first 7 a. m. after notice of arrival is sent or given to consignee.
3. In computing time on freight shipments, Sundays and legal holidays on which the freight house is closed will be excluded from both free and chargeable time.

CAR DEMURRAGE.

4. Cars held for or by consignors or consignees for loading or unloading are subject to the following demurrage rules and charges:
 - (a) Free time allowed—
 - (1) One to 9 cars inclusive:
Seventy-two hours' (3 days) free time will be allowed for loading or unloading all commodities.
 - (2) Ten or more cars:
Seventy-two hours' (3 days) free time for the first 9 cars, plus 24 hours' (one day) free time for each additional group of 3 cars (or fraction thereof), will be allowed for loading or unloading all commodities.
 - (b) Computing time—
 - (1) On cars held for loading, time will be computed from the first 7 a. m. after placement, and without notice of placement.
 - (2) On cars held for unloading, time will be computed from the first 7 a. m. after placement, and after the day on which notice of arrival is sent or given to the consignee.
 - (3) In computing time, Sundays and legal holidays on which the freight house is closed will be excluded from both free and chargeable time.
 - (c) Demurrage charges—
 - (1) After the expiration of free time allowed, a charge of \$3 per car per day, or fraction of a day, will be made until car is released. 3.00

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., January 24, 1931.

No. 837.

Panama, Gulf of Panama, Perlas Islands, Pedro Gonzales Island, shoal southward, nonexistence of shoal. The following is quoted from Notice to Mariners No. 3, Washington, D. C., dated January 17, 1931:

The commanding officer of the U. S. S. *Niagara* reports that as a result of sweeping operations in the vicinity of the Perlas Islands a shoal having a depth of 2 fathoms over it has been located 2 miles 264 degrees from Passage Rock.

Approximate position: Lat. 8° 20' 38" N., long. 79° 08' 45" W.

The 6-fathom shoal previously reported about 1,200 yards northward of the above position does not exist and will be expunged from the chart.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Week Ending January 24, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Herbijorn.....	Anglo-Saxon Petroleum Co.	January 19...	January 21...	10,917	.....
Balboa.....	Johnson Line.....	January 19...	January 19...	1	.....
Santa Barbara.....	Grace Line.....	January 19...	January 20...	9	.....
La Perla.....	United Fruit Co.....	January 19...	January 20...	101	.....
Vega.....	U. S. Navy.....	January 20...	January 21...	14	75
Brielle.....	Dutch Line.....	January 20...	January 20...	123	.....
Amasis.....	Hamburg-American Line.....	January 20...	January 20...	497	.....
Satanta.....	Standard Oil Co.....	January 22...	January 23...	6,180	.....
Planet.....	Hamburg-American Line.....	January 22...	January 22...	38	.....
Tai Yin.....	Barber S. S. Line.....	January 22...	January 22...	225	.....
California.....	Texas Corporation.....	January 22...	January 22...	9,589	.....
Santa Maria.....	Grace Line.....	January 22...	January 23...	72	60
Virginia.....	Panama-Pacific Line.....	January 23...	January 23...	.....	176
President Van Buren..	Dollar Line.....	January 23...	January 23...	1	.....
Orcoma.....	Royal Mail S. P. Co.....	January 24...	January 24...	.....	1

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending January 31, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Parissima.	United Fruit Co.	January 18.	January 18.		9
August Thyssen.	Aluminium Line.	January 18.	January 18.		2
Baralt.	Royal Netherlands S. S. Co.	January 18.	January 18.		83
Cristobal.	Panama R. R. S. S. Line.	January 18.	January 18.		722
Ulua.	United Fruit Co.	January 18.	January 18.	49	232
Brielle.	Royal Netherlands S. S. Co.	January 19.	January 19.	240	64
Balboa.	Johnson S. S. Line.	January 19.	January 19.	101	55
Santa Barbara.	Grace Line.	January 19.	January 20.	184	102
Calí.	North German Lloyd.	January 19.	January 19.	460	
Amasis.	Hamburg-American Line.	January 19.	January 20.	145	93
Costa Rica.	Royal Netherlands S. S. Co.	January 20.	January 20.	22	(²)
Magdalena.	Hamburg-American Line.	January 20.	January 20.	52	(²)
Vancouver.	Hamburg-American Line.	January 20.	January 21.	15	54
Saint Louis.	French Line.	January 20.	January 21.	71	(²)
Musicien.	T. & J. Harrison.	January 20.	January 21.	286	(²)
Pellerin de la Touche.	French Line.	January 20.	January 22.	81	243
La Perla.	United Fruit Co.	January 20.	January 23.	712	(²)
Durazzo.	Hamburg-American Line.	January 21.	January 21.		124
Sixael.	United Fruit Co.	January 21.	January 21.		606
Zacapa.	United Fruit Co.	January 21.	January 22.	448	303
Calamares.	United Fruit Co.	January 21.	January 22.	496	5 ¹ / ₂
Irióna.	United Fruit Co.	January 21.	January 22.	702	(²)
Lochgoil.	Royal Mail Steam Packet Co.	January 21.	January 22.	1	132
Salvador.	Pacific Steam Navigation Co.	January 22.	January 22.		973 ¹ / ₂
Kwansai Maru.	Osaka Shosen Kaisha.	January 22.	January 22.	100	55
Tai Yin.	Barber S. S. Line.	January 22.	January 22.	198	(²)
Emperatriz.	G. Rivers.	January 22.	January 22.	30	
Damsterdijk.	Holland-America Line.	January 22.	January 23.	173	1 ¹ / ₂
Planet.	Hamburg-American Line.	January 22.	January 23.	123	(²)
Bolívar.	Colombian S. S. Line.	January 23.	January 24.	49	23
Magdalena.	Hamburg-American Line.	January 23.	January 22.	22	
Cauca.	National Navigation Co.	January 23.	January 23.	189	
Almagro.	Pacific Steam Navigation Co.	January 23.	January 24.	29	320
Amsterdam.	Royal Netherlands S. S. Co.	January 24.	January 24.	144	3
Atlántida.	Standard Fruit & S. S. Co.	January 23.	January 24.	229	363
Santa Teresa.	Grace Line.	January 24.	January 24.	363	(²)
Cartago.	United Fruit Co.	January 24.	January 24.	4	
Irióna.	United Fruit Co.	January 24.	January 24.	(²)	220
Costarica.	Royal Netherlands S. S. Co.	January 24.	January 24.	2	
Colombo.	Italian S. S. Line.	January 24.	January 24.	310	
Oreóna.	Pacific Steam Navigation Co.	January 24.	January 24.	6	(²)
Calí.	North German Lloyd.	January 25.	January 25.		240 ¹ / ₂
Cartago.	United Fruit Co.	January 25.	January 25.		4
Costarica.	Royal Netherlands S. S. Co.	January 25.	January 25.		250
Colombo.	Italian S. S. Line.	January 25.	January 25.		102
Caldas.	National Navigation Co.	January 25.	January 25.		127
Calamares.	United Fruit Co.	January 25.	January 25.	8	223
Nosa Prince.	N. O. & S. A. S. S. Co.	January 25.	January 26.	161	120
Hélio.	Panama Mail S. S. Co.	January 25.	January 27.	1,374	(²)
Magdalena.	Hamburg-American Line.	January 26.	January 26.		756
San Marcos.	Quaker S. S. Line.	January 26.	January 26.	55	(²)
Donau.	North German Lloyd.	January 26.	January 26.	47	227
Nithero.	Royal Mail Steam Packet Co.	January 26.	January 27.	(²)	2
Buenaventura.	Panama Railroad S. S. Line.	January 26.	January 27.	904	95
La Emperatriz.	G. Rivers.	January 26.	January 27.		50
Sulairia.	Donaldson S. S. Line.	January 26.	January 28.	(²)	334
Archen.	North German Lloyd.	January 27.	January 27.	139	24
Colombia.	Panama Mail S. S. Co.	January 27.	January 28.	205	491
Charles E. Harwood.	Mexican Petroleum Co.	January 27.	January 28.	913	(²)
Austvängen.	Aluminium Line.	January 27.	January 28.	217	114
San José.	United Fruit Co.	January 27.	January 31.	629	232
Acojutla.	Pacific Steam Navigation Co.	January 27.	January 31.	367	305
Tela.	United Fruit Co.	January 28.	January 31.	897	59
Tamaha.	Standard Oil Co.	January 28.	January 29.	9,391	(²)
Oruzio.	Italian Line.	January 28.	January 29.	22	606
Saint Joseph.	French Line.	January 28.	January 29.	25	61
Namiales.	North German Lloyd.	January 28.	January 28.	587	
Santa Marta.	United Fruit Co.	January 28.	January 29.	413	256
Tolosa.	United Fruit Co.	January 28.	January 29.	267	6
Aneón.	Panama Railroad S. S. Line.	January 28.	January 28.	2,646	
Venezuela.	Panama Mail S. S. Co.	January 29.	January 30.	629	(²)
San Antonio.	French Line.	January 29.	January 30.	34	110
Cauca.	National Navigation Co.	January 29.	January 30.		117
Santa Inez.	Grace Line.	January 30.	January 31.	103	261
Baracoa.	United Fruit Co.	January 30.	January 31.	84 ¹ / ₂	30
Guayquil.	Panama Railroad S. S. Line.	January 30.	January 31.	166	(²)
Seattle.	Hamburg-American Line.	January 30.	January 31.	92	66
Syra.	Hamburg-American Line.	January 30.	January 31.	312	261
Amapala.	Standard Fruit & S. S. Co.	January 30.	January 31.	60	366

* No cargo discharged.

* No cargo laded.

* One package.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tela.....	United Fruit Co.....	January 31...	January 31...	6	183
Cerigo.....	Hamburg-American Line.....	January 31...	January 31...		163
Barneveld.....	Royal Netherlands S. S. Co.....	January 31...	January 31...	24	3
Cid.....	Pacific Steam Navigation Co.....	January 31...	January 31...	367	

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective January 13, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Ancon.....	January 20...	January 25...	January 28...	February 1...	February 4...	February 9
Cristobal.....	February 3...	February 8...	February 11...	February 16...	February 19...	February 24.
Ancon.....	February 17...	February 22...	February 25...	March 1.....	March 4.....	March 9.
Cristobal.....	March 3.....	March 8.....	March 11.....	March 15.....	March 18.....	March 23.
Ancon.....	March 17.....	March 22.....	March 25.....	March 29.....	April 1.....	April 6.
Cristobal.....	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.
Ancon.....	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.
Cristobal.....	April 28.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.
Ancon.....	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.
Ancon.....	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.
Ancon.....	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.

* Effective April 28th, steamers sail daylight saving time.
* Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.
Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1.20 per barrel at Balboa and Cristobal, Diesel oil \$1.80 per barrel at Balboa and \$1.65 per barrel at Cristobal.

Coal is supplied to steamships, including warships of all nations, delivered and trimmed in bunkers, at \$7.25 per ton of 2,240 pounds at Cristobal, and \$10.25 at Balboa. Extra charges are made for delivery from lighters, special trimming in bunkers, trimming on deck, furnishing lump coal for galley use, and run of mine coal in sacks.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Panama Mail Steamship Company, Pacific Steam Navigation Company, Greece Line, Chilean Line, Navigazione Generale Italiana, Hamburg-American Line. The Panama Mail and Hamburg-American Line charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

Binders for The Panama Canal Record.

Cardboard covers, punched and fitted with brass fasteners forming binders for THE PANAMA CANAL RECORD are offered for sale at 25 cents a set, for the benefit of those who wish to keep a file of the issues for ready reference. Orders may be addressed to The Panama Canal, Balboa Heights, Canal Zone, or The Panama Canal, Washington, D. C.

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

MOVEMENTS OF OCEAN VESSELS.—Continued from page 385.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 31	No. 698-M ²⁷	Pan American Airways.	Miami via wayports.	January 31	Volendam	Holland-America Line	New York via wayports.
January 31	No. 945-M ²⁷	Pan American-Grace Airways.	Talara via wayports.	January 31	Baracoa	Colombian S. S. Line	New York via wayports.
				January 31	Anapala	Standard Fruit & S. S. Co.	New Orleans and wayports.
				PORT OF BALBOA.			
				January 23	Almirante Grau	Peruvian Government	Callao, Peru.
				January 23	Coronel Bolognesi	Peruvian Government	Callao, Peru.
				January 23	R-1 ²⁸	Peruvian Government	Callao, Peru.
				January 28	R-2 ²⁸	Peruvian Government	Callao, Peru.
				January 28	R-3 ²⁸	Peruvian Government	Callao, Peru.
				January 28	R-4 ²⁸	Peruvian Government	Callao, Peru.

²⁷ Air mail carrier.

²⁸ Submarine.

* Other than ships passing through the Canal.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 11, 1931. No. 28.

United States Naval Vessels Arrive for Maneuvers.

The U. S. S. *Texas*, flagship of the United States Fleet, with commander-in-chief, Admiral J. V. Chase on board, arrived at Cristobal from Guantanamo Bay, Cuba, on February 6, 1931, and transited the Canal to Balboa the following day, The *Texas* was immediately followed in transit by the U. S. S. *Arkansas*, flagship of the Scouting Fleet, which fleet arrived also from Guantanamo Bay on February 7. The various other units of the Scouting Fleet transited the Canal on the 8th, 9th, and 10th, and proceeded to previously assigned berths in Balboa Harbor, or outer anchorage in Panama Bay.

After a few days' visit these vessels will depart into the Pacific to take up the defense of the Canal in maneuvers, against the simulated attack of the Battle Fleet, which has sailed from California waters. The combined fleets, consisting of approximately 150 vessels, manned by between 30,000 and 35,000 men, will be in Isthmian waters until about March 25.

The dirigible *Los Angeles* arrived over Balboa from Lakehurst, N. J., via Guantanamo, in the night of February 6, and is to be attached to the defending fleet.

Water Shipped to Curacao to Relieve Water Shortage.

The tank ship *Charles E. Harwood*, of the Pan-American Petroleum & Transportation Company, sailed from Cristobal on February 1, 1931, carrying as its cargo 1,500,000 gallons of drinking water destined to Curacao, Dutch West Indies, and the cargo steamer *Dorelian*, of the Leyland Line, sailed on February 8, 1931, with 252,270 gallons. The water, which was shipped in an attempt to relieve an acute water shortage in Curacao, was purchased by the Dutch Government from The Panama Canal. The water shipments will continue periodically until the condition is relieved. It is said that this is the first time in the history of Curacao that it has been found necessary to import water for drinking purposes.

Supplement No. 4—Tariff No. 10.

THE PANAMA CANAL, PANAMA RAILROAD COMPANY,
BALBOA HEIGHTS, C. Z., February 7, 1931.

ITEM 41.—PANAMA RAILROAD COMPANY SWITCHING TARIFF.
(Effective February 15, 1931.)

Paragraph 2 is annulled and the following substituted:

2. For switching loaded cars from industrial or private tracks to yards for movement over the Panama Railroad, per switch (any number of cars)..... \$5.00

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, February 7, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.			Entered Canal.			Completed transit.			Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Chile Maru.	31	16.30	1	12.25	1	9.07	1	10.25	1	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	14.0	Norfolk, Va.	Arica, Chile.	Ballast.	5,923	4,409
Dio.	31	17.40	1	1.50	1	10.05	1	11.15	1	American.	Gulf-Pac. Redwood Line.	381.0	52.2	18.6	New Orleans, La.	Seattle, Wash.	Iron pipe, gen.	3,172	5,708
Kansan.	31	20.40	1	3.30	1	11.18	1	12.17	1	American.	Amer-Hawaiian Line.	404.0	53.0	16.0	Boston, Mass.	Portland, Ore.	General	2,413	6,779
Gisla 2.	1	1.05	1	5.05	1	12.05	1	13.50	1	Norwegian.	McMillan Export Co.	360.5	51.0	13.6	Philadelphia, Pa.	Vancouver, B. C.	Ballast.	5,101	3,735
Northernmoor 2.	1	5.15	1	6.35	1	14.22	1	20.30	1	British.	Moore Line, Ltd.	375.0	52.5	24.6	Antwerp, Belgium.	N. Plymouth, N. C.	Basic slag.	6,738	6,051
Columbia 2.	1	5.00	1	7.35	1	15.10	1	16.15	1	Danish.	D/S Orient.	384.7	54.4	13.6	New York, N. Y.	Vancouver, B. C.	Ballast.	6,427	4,751
Patoka 3.	31	12.55	1	8.25	1	15.43	1	16.15	1	American.	U. S. Navy.	461.0	60.0		Hampton Rds., Va.	Balboa, C. Z.	Ballast.	1,718	5,699
Americaustar.	2	00.50	2	5.40	2	13.54	2	15.20	2	American.	Nelson Line.	386.8	52.2	17.9	New York, N. Y.	Seattle, Wash.	General.	4,167	
V-5 4.	30	16.40	2	6.40	2	14.21	2	15.21	2	American.	U. S. Navy.	341.0	27.7		Hampton Rds., Va.	Balboa, C. Z.	Ballast.	5,696	8,508
F. J.	2	1.20	2	7.15	2	15.20	2	15.15	2	American.	Luckenbach Line.	446.0	56.0	25.0	Houston, Tex.	Portland, Ore.	General.	10,405	7,401
Luckenbach.	2	7.50	2	8.00	2	15.54	2	17.00	2	British.	Blue Star Line.	473.8	59.0	23.6	Tyne, England.	Vancouver, B. C.	Ballast.	7,476	5,485
Trojanstar.	1	21.00	2	9.30	2	16.48	2	19.25	2	Swedish.	Johnson Line.	426.9	56.2	18.3	Limhamn, Sweden.	Vancouver, B. C.	(?)	7,773	5,634
Canada 2.	2	14.40	2	16.45	3	9.14	3	10.16	3	American.	Richfield Oil Co.	430.0	59.6	19.0	Baltimore, Md.	Los Angeles, Calif.	Ballast.	6,345	7,470
Pat Doheny 1.	2	15.00	2	17.45	3	10.14	3	11.35	3	American.	Ishman S. S. Lines.	424.6	55.2	23.4	Baltimore, Md.	Tacoma, Wash.	Steel, general.	3,300	11,053
Robin Adair.	2	16.05	2	3.40	3	11.12	3	12.20	3	American.	U. S. Navy.	477.9	62.9	26.9	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	5,335	8,313
L-53 5.	2	4.05	3	5.05	3	14.53	3	15.55	3	British.	Shaw, Savill & Albion.	456.1	56.0	22.2	London, England.	Auckland, N. Z.	General.	5,427	4,113
Defiance 2.	29	11.45	3	7.10	3	15.39	3	16.40	3	American.	Roosevelt S. S. Co., S.B.	367.5	51.5	13.0	Boston, Mass.	Shanghai, China.	Ballast.	7,085	5,050
Rigel 2.	3	7.25	3	7.50	3	16.02	3	17.20	3	French.	Bergen S. S. Co.	425.8	56.6	18.6	Cherbourg, France.	Los Angeles, Calif.	Ballast.	305	9,853
Melpomene 1.	3	6.40	3	9.00	3	17.01	3	18.05	3	Norwegian.	Desmarre Freres.	461.9	60.0	18.6	Boston, Mass.	Sydney, Australia.	General.	2,352	1,549
Triton.	1	13.50	3	9.55	3	17.49	3	18.45	3	Norwegian.	Wilhelm Wilhelmsen.	251.0	40.0	13.7	Cristobal, C. Z.	Champerico, Guat.	Ballast.	1,539	7,550
Corinto.	3	14.15	4	00.15	4	9.18	4	12.20	4	American.	Panama Mail S. S. Co.	415.0	56.0	15.7	Baltimore, Md.	Seattle, Wash.	General.	2,950	6,754
Willkeno.	3	20.15	4	1.30	4	10.55	4	12.00	4	American.	Williams S. S. Line.	404.6	53.9	20.0	Boston, Mass.	Seattle, Wash.	General.	7,899	6,957
Oregonian.	3	20.15	4	1.30	4	10.55	4	12.00	4	American.	Amer-Hawaiian Line.	411.7	54.5	27.0	Port Tampa, Fla.	Shanghai, China.	General.	2,924	9,262
Welsh City.	4	6.30	4	6.40	4	13.45	4	16.20	4	British.	Mitsubishi.	448.9	60.2	22.5	Boston, Mass.	Seattle, Wash.	General.	8,312	6,097
Harry.	4	3.50	4	7.05	4	16.08	4	17.10	4	American.	Luckenbach Line.	448.9	60.2	22.5	Boston, Mass.	Seattle, Wash.	General.	1,734	7,539
Luckenbach.	4	7.30	4	8.00	4	16.35	4	17.35	4	American.	Norton, Lilly & Co.	431.0	56.0	15.0	Baltimore, Md.	Everett, Wash.	Ballast.	7,539	5,044
Helfron.	3	3.20	4	9.25	4	17.33	4	18.40	4	French.	French Line.	440.0	57.2	18.8	Havre, France.	Los Angeles, Calif.	General.	9,607	6,551
San Francisco.	4	9.45	4	10.10	4	22.56	4	23.59	4	Norwegian.	Pet. Stor. & Fin. Corp.	442.7	58.8	17.0	Avonmouth, Eng.	Los Angeles, Calif.	Ballast.	7,539	5,044
Morgenen 2 2.	4	10.00	4	11.20	4	18.36	4	19.40	4	Norwegian.	Sun Oil Co.	490.6	66.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	7,539	5,044
Eastern Sun 2 2.	4	10.00	4	11.20	4	18.36	4	19.40	4	Norwegian.	Sun Oil Co.	490.6	66.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	7,539	5,044
Gen. G. W.	4	9.40	4	9.40	4	17.33	4	18.40	4	American.	U. S. Army.	89.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	7,394	5,099
Getty 6.	4	13.55	5	00.10	5	9.12	5	10.11	5	American.	Richfield Oil Co.	494.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	15,551	4,297
Huguenot 1.	4	7.55	5	2.00	5	10.25	5	11.30	5	American.	Ore S. S. Corp.	550.3	72.2	21.5	Baltimore, Md.	Cruz Grande, Chile	Ballast.	2,205	6,190
Marore.	4	21.20	5	3.50	5	11.31	5	12.50	5	Swedish.	Transatlantic S. S. Co.	448.0	57.0	17.6	Gavle, Sweden.	Melbourne, Aus. lia.	Wood, pulp, gen.	2,665	8,942
Parrakoola 2.	4	21.20	5	3.50	5	11.31	5	12.50	5	Swedish.	Transatlantic S. S. Co.	448.0	57.0	17.6	Gavle, Sweden.	Melbourne, Aus. lia.	Wood, pulp, gen.	2,665	8,942
Hokuroku 2.	5	9.30	5	10.00	5	16.27	5	18.15	5	Japanese.	Osaka Shosen Kaisha.	446.0	60.6	19.11	New York, N. Y.	Hongkong, China.	General.	2,665	8,942
Maru 2 2.	5	9.30	5	10.00	5	16.27	5	18.15	5	Japanese.	Osaka Shosen Kaisha.	446.0	60.6	19.11	New York, N. Y.	Hongkong, China.	General.	2,665	8,942

¹ Tanker.

² Motor ship.

³ Aircraft tender.

⁴ Submarine.

⁵ Launch.

⁶ Tug.

⁷ General, cement, and coffee.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam	Salt draft.			Nature.	Tons.	Gross.	Net.
Gen. Wm. M. Graham ¹⁵ .	1	7 25	1	7 00	1	14 45	1	22 05	American.	U. S. Army	160.2	32.0	15.0	Balboa, C. Z.	Cristobal, C. Z.	Coffee, general.	1,600	3,041	1,967
Agra.	1	7 40	1	8 09	1	16 20	1	23 30	German	North German Lloyd	296.3	46.2	15.0	Champerico, Guat.	Bremen, Germany	General	7,820	5,661	5,661
Witram.	1	7 40	1	8 40	1	17 20	1	23 30	German	North German Lloyd	449.1	58.2	26.0	Champerico, B. C.	Bremen, Germany	General	7,820	5,661	5,661
Buenos Aires ¹⁶ .	1	8 10	1	10 40	1	18 50	1	21 35	Swedish	Johnson Line	426.9	56.2	27.0	Champerico, B. C.	Stockholm, Sweden	General	7,845	7,591	7,591
Champerico.	1	11 45	1	12 20	1	20 00	1	21 35	British	Pacific Steam Nav. Co.	290.1	41.7	15.5	Champerico, Guat.	Cristobal, C. Z.	(¹⁸)	268	2,597	1,587
Svealand ¹⁶ .	1	14 05	1	14 52	2	14 05	2	14 05	Swedish	Ore S. S. Corp.	561.1	72.2	34.0	Valparaíso, Chile	New York, N. Y.	Iron ore.	22,146	15,424	4,421
Rapot.	1	15 10	1	16 05	2	00 40	2	22 45	Swedish	North German Lloyd	393.4	54.3	26.0	Valparaíso, Chile	Hamburg, Germany	Nitrates, general.	7,510	6,583	4,626
Asral ¹⁷ .	1	16 20	1	17 07	2	1 50	2	22 45	American.	Standard Transp. Co.	439.5	58.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gas oil.	10,351	8,913	6,210
Atlantio ¹⁶ .	1	19 00	2	6 09	2	14 51	2	14 51	Norwegian.	Anglo-Saxon Pet. Co.	441.6	57.5	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	9,070	7,589	5,312
Lautaro ¹⁶ .	1	23 50	2	6 39	2	18 00	2	21 25	British	Pacific Steam Nav. Co.	399.1	52.2	27.5	Valparaíso, Chile	London, England	General	7,813	6,759	4,840
Heranger ¹⁶ .	2	1 00	2	7 30	2	16 55	2	20 10	Norwegian.	Westfal, Larsen & Co.	398.1	54.8	19.0	Valparaíso, B. C.	Pernambuco, Braz.	Lumber, general	3,825	6,864	5,280
Yuri Maru.	2	1 00	2	7 45	2	18 45	2	20 25	Japanese.	Kokusa Kisen Kaisha	425.0	53.6	27.3	Valparaíso, B. C.	Boston, Mass.	Sugar	8,600	6,909	5,147
Santa Clara.	2	7 00	2	8 15	2	15 55	2	21 00	American.	Grace Line	483	63.9	24.0	Maile, Japan	New York, N. Y.	General	3,837	11,080	7,442
Durazzo.	2	14 30	2	15 08	3	23 20	3	1 00	British.	Hamburg-American Line	287.5	34.5	14.0	Talcahuano, Chile	Cristobal, C. Z.	Coffee, hides	340	1,632	1,041
El Lobo.	2	19 30	2	17 29	3	1 00	3	1 00	American.	Atlantic Refining Co.	385.2	51.0	23.0	Tumaco, Colombia	Philadelphia, Pa.	Crude oil	6,102	4,851	3,326
California.	2	12 15	3	6 10	3	14 40	3	15 20	American.	Panama-Pacific Line	574.4	80.3	29.4	La Libertad, Peru	New York, N. Y.	General	7,700	24,506	17,565
San Eduardo ¹ .	3	1 40	3	6 30	3	15 45	3	19 00	British.	Anglo-Mexican Oil Co.	420.3	54.6	26.0	Los Angeles, Calif.	Lizards, Eng. ¹⁷ .	Gasoline	8,200	6,390	4,382
Saramacca.	2	12 00	3	7 14	3	16 15	3	16 15	American.	United Fruit Co.	336.4	42.0	20.0	San Francisco, Cal.	Cristobal, C. Z.	General	1,037	3,368	2,303
Gen. G. W. Getty ¹⁵ .	3	7 30	3	16 20	3	16 20	3	16 20	American.	U. S. Army	98.0	22.0	...	Balboa, C. Z.	Cristobal, C. Z.	General	5,673	7,103	4,991
Ohion.	3	6 40	3	8 14	3	16 50	3	16 50	American.	Amer-Hawaiian Line	407.7	53.7	25.0	Portland, Ore.	Boston, Mass.	General	5,400	5,349	2,450
Herman Fraser.	3	8 30	3	9 16	3	18 05	3	18 05	American.	Dutton Lumber Corp.	356.0	51.6	27.0	Westport, Ore.	Providence, R. I.	Lumber	7,645	7,989	5,856
Takaoka Maru.	2	20 50	3	10 14	3	19 30	4	12 10	Japanese.	Nippon Yusen Kaisha	445.0	58.0	24.0	Hongkong, China.	New York, N. Y.	General	7,645	7,989	5,856
Lillian.	3	12 20	3	13 07	3	20 15	3	20 15	American.	Luckenbach Line	449.9	60.2	31.0	Portland, Ore.	Boston, Mass.	General, lumber	8,400	9,294	6,866
Canadian.	3	14 10	3	14 49	3	22 20	4	1 40	British.	Can. Nat. Steamships.	400.0	52.3	19.0	Melbourne, Auslia.	Halifax, N. S.	General	2,427	5,954	4,139
Conqueror.	3	22 00	4	6 15	4	16 30	4	21 05	American.	U. S. Navy	384.0	64.9	26.3	Balboa, C. Z.	Cristobal, C. Z.	(¹⁹)	5,348	6,642	4,860
Rochester.	3	22 00	4	6 16	4	16 45	4	21 05	Swedish	Johnson Line	409.0	52.0	24.0	Vancouver, B. C.	Stockholm, Sweden	General	7,722	7,795	5,997
Axel Johnson ¹⁶ .	3	21 30	4	7 26	4	17 25	4	22 30	Italian.	Nav. Libera Tristina	430.0	53.0	29.5	Vancouver, B. C.	Trieste, Italy	Soya beans.	7,192	6,112	4,265
Feltrina ¹⁶ .	3	21 55	4	8 16	4	18 15	4	19 40	Norwegian.	Fern Line	382.7	54.3	26.0	Vladivostok, U. S. S. R.	Copenhagen, Den.	General	8,015	6,134	4,335
Janeta.	4	00 20	4	9 00	4	19 15	4	20 10	British.	MacLay & McIntyre.	401.9	55.0	24.0	Vancouver, B. C.	London, England	General	7,792	6,219	4,611
Belgium Maru.	4	1 30	4	9 47	4	20 00	4	21 05	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	27.0	Manila, P. I.	New York, N. Y.	Sugar, hemp	7,186	7,473	5,536
Robin.	4	1 40	4	10 46	4	21 00	4	21 00	American.	Isthmian S. S. Lines.	424.8	55.2	26.0	Vancouver, B. C.	Baltimore, Md.	(²⁰)	9,200	10,793	7,619
Goodfellow.	4	7 15	4	11 27	4	22 25	5	14 10	Dutch.	N. Pacific Coast Line	485.5	62.3	29.2	Vancouver, B. C.	Rotterdam, Holland	General	9,849	7,481	4,975
Drechtidjt ¹⁶ .	4	7 40	4	11 45	4	22 50	4	22 50	American.	Shell Oil Co.	425.0	57.2	28.2	Los Angeles, Calif.	Fall River, Mass.	(²¹)	6,114	5,680	4,080
S. C. T. Dodd.	4	9 40	4	12 14	4	23 45	4	23 45	American.	Williams S. S. Corp.	386.8	52.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	20	...	...
Willpolo.	4	9 40	4	12 14	4	23 45	4	23 45	American.	Williams S. S. Corp.	386.8	52.2	24.0	Seattle, Wash.	Baltimore, Md.	Lumber, pulp, and general.	20	...	...

¹⁹ Wheat, fruit, and general.²⁰ Coffee, hides, and broomroot.²¹ For orders.²² Motor ship.²³ Mine planter.²⁴ Tanker.

Tascaluba ¹	4	15.10	4	15.51	5	1.15	7	10.30	British.....	Union Oil Co.....	420.5	54.4	26.0	Los Angeles, Calif.	Cristobal, C. Z.....	8,723	6,022	4,543
Sacramento.....	5	6.21	5	16.45	5	16.45	5	22.03	American.....	U. S. Navy.....	224.0	40.0	14.3	Balboa, C. Z.....	Cristobal, C. Z.....	2,461	5,705	4,167
Dochet.....	4	23.00	5	6.22	5	16.35	5	18.25	American.....	Gulf-Pacific Line.....	389.8	52.2	30.1	Puget Sound.....	Mobile, Ala.....	10,018	7,396	5,588
Asia ¹⁶	5	1.00	5	7.30	5	17.25	5	16.35	Danish.....	East Asiatic Co., Ltd.....	425.3	55.2	30.0	Vancouver, B. C.....	Copenhagen, Den.....	6,076	5,831	4,341
Parthian.....	5	5.45	5	8.09	5	18.15	5	18.15	British.....	Donaldson Line.....	399.7	51.9	25.0	Victoria, B. C.....	Glasgow, Scotland.....	8,000	6,515	4,756
Nordkap ¹⁶	5	8.50	5	9.48	5	19.05	5	19.05	Danish.....	E. I. Dupont.....	384.7	54.4	25.0	Tocopilla, Chile.....	Charleston, S. C.....	2,396	3,984	2,612
Point Montara.....	5	10.19	5	10.19	5	19.55	5	19.55	American.....	Swayne & Hoyt.....	324.0	46.2	20.0	Portland, Oreg.....	New Orleans, La.....	7,215	6,969	5,373
Bradburn.....	5	13.00	5	13.30	5	21.00	5	22.55	British.....	Swire R. Smith & Sons.....	415.0	54.3	25.0	Vancouver, B. C.....	London, England.....	10,035	8,300	6,020
Benjamin.....	5	13.50	5	14.44	5	22.50	7	9.32	Norwegian.....	Fred Olsen & Co.....	452.0	59.5	28.0	Vancouver, B. C.....	Oslo, Norway.....	3,490	6,254	4,099
City of.....	5	14.10	5	15.35	5	23.45	8	14.10	American.....	Panama Mail S. S. Co.....	206.1	45.9	18.4	San Francisco, Cal.....	Cristobal, C. Z.....	5,014	12,821	9,507
Odin.....	5	17.00	5	17.39	6	2.35	6	5.35	German.....	Chilean Nitrate Prod.....	432.5	59.1	24.0	Tocopilla, Chile.....	Azores ¹⁷	8,123	7,099	5,016
Galdas ¹⁶	5	19.20	6	6.19	6	18.55	7	12.40	Colombian.....	National Navigation Co.....	116.0	21.1	11.0	Buenaventura, Col.....	Cristobal, C. Z.....	10,035	8,348	2,603
Wyoming.....	5	22.14	6	6.13	6	21.20	7	9.20	French.....	French Line.....	407.3	61.2	26.0	Vancouver, B. C.....	Le Havre, France.....	8,467	7,701	5,290
Minnesota.....	6	1.50	6	7.38	6	20.30	6	20.30	American.....	Amer-Hawaiian Line.....	470.7	53.7	27.0	Vancouver, B. C.....	London, England.....	3,261	9,436	6,561
Orta.....	5	23.30	6	8.13	6	19.00	7	1.10	British.....	Pacific Steam Nav. Co.....	484.5	58.2	20.0	Seattle, Wash.....	Boston, Mass.....	8,415	7,150	5,024
San Clemente.....	6	2.13	6	9.12	6	21.25	6	21.25	American.....	Quaker Line.....	410.4	54.4	24.3	Liverpool, England.....	General.....	3,261	9,436	6,561
West Cape.....	6	7.15	6	9.45	6	20.15	6	22.15	American.....	McGormick S. S. Co.....	409.3	54.2	23.0	Seattle, Wash.....	Philadelphia, Pa.....	6,899	6,476	4,682
Jefferson.....	6	12.05	6	13.39	6	23.40	7	5.30	American.....	Interocean S. S. Co.....	440.0	56.0	28.4	Portland, Oreg.....	London, England.....	7,665	6,566	4,990
Myers.....	6	18.20	7	6.17	7	13.20	8	00.30	American.....	Grace Line.....	370.0	53.2	21.0	Valparaiso, Chile.....	New York, N. Y.....	10,035	8,300	6,020
Santa Rita ¹⁶	7	9.30	7	10.36	7	19.30	8	1.05	British.....	Shaw, Savill & Albion.....	500.3	63.3	25.4	Wellington, N. Z.....	London, England.....	3,490	6,254	4,099
Cedarbank ¹⁶	7	12.30	7	13.24	7	22.10	8	4.21	British.....	Andrew Weir & Co.....	420.4	53.9	25.0	Pimental, Peru.....	Marseilles, France.....	8,123	7,099	5,016

¹ Tanker.

²² Lumber, wheat, and spelter.

²³ Nitrates, copper, and general.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—		Date.	Vessel.	Line.	For—	
February 1.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.....	February 1.....	No. 9670 ²⁴	Pan American Airways.....	Pan American Airways.....	San Salvador and wayp'ts.	
February 1.....	No. 9664 ²⁴	Pan American Airways.....	San Salvador and wayp'ts.	February 1.....	No. 669-M ²⁴	Pan American Airways.....	Pan American Airways.....	Miami via wayp'ts.	
February 1.....	N. C. 26-V ²⁴	Sikorsky Aircraft Corp.....	Bridgeport and wayp'ts.	February 1.....	No. 306-N ²⁴	Pan American-Grace Airways.....	Pan American-Grace Airways.....	Talara via wayp'ts.	
February 2.....	Caledonia.....	Anchor Line.....	New York via wayp'ts.	February 1.....	N. C. 26-V ²⁴	Sikorsky Aircraft Corp.....	Sikorsky Aircraft Corp.....	Talara, Peru.....	
February 2.....	Vulcania.....	French Line.....	New York via wayp'ts.	February 1.....	Tolosa.....	United Fruit Co.....	United Fruit Co.....	New York via Habana.	
February 2.....	Macoris.....	United Fruit Co.....	Havre via wayp'ts.	February 1.....	Acon.....	Panama R. R. S. S. Line.....	Anchor Line.....	New York via Haiti.	
February 2.....	Heredia.....	Pan American Airways.....	San Salvador and wayp'ts.	February 3.....	Caledonia.....	Cosulich Line.....	Cosulich Line.....	New York via wayp'ts.	
February 2.....	Coridoba C-40 ²⁴	Stadta Airplane Co.....	Baranquilla and wayp'ts.	February 3.....	Vulcania.....	Pan American Airways.....	Pan American Airways.....	New York via wayp'ts.	
February 2.....	J. M. Danziger.....	Pan American Airways.....	Baranquilla and wayp'ts.	February 3.....	Heredia.....	United Fruit Co.....	United Fruit Co.....	Aguadulce.....	
February 3.....	No. 145-M ²⁴	Pan American Airways.....	Aguadulce.....	February 3.....	Macoris.....	French Line.....	French Line.....	New Orleans and wayp'ts.	
February 3.....	Camden.....	United Fruit Co.....	Guaraca, D. W. I.....	February 4.....	J. M. Danziger.....	Huasteca Petroleum Co.....	Huasteca Petroleum Co.....	Havre via wayp'ts.	
February 3.....	No. 306-N ²⁴	Pan American-Grace Airways.....	Talara via wayp'ts.	February 4.....	No. 9664 ²⁴	Pan American Airways.....	Pan American Airways.....	Aruba, D. W. I.....	
February 4.....	Republic.....	United States Lines.....	Philadelphia and wayp'ts.	February 4.....	No. 608-M ²⁴	Pan American Airways.....	Pan American Airways.....	San Salvador and wayp'ts.	
February 4.....	Pastores.....	United Fruit Co.....	New York via Habana.	February 4.....	Inapaquina ²⁵	A. Tagaropoulos.....	A. Tagaropoulos.....	Colon, Rep. of Panama.	
February 4.....	Barneveld.....	Royal Netherlands S. S. Co.....	Port Limon, Costa Rica.....	February 4.....	Santa Marta.....	United Fruit Co.....	United Fruit Co.....	New York via Kingston.	

²⁴ Air mail carrier.

²⁵ Motor boat.

* Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 4	Santa Marta	United Fruit Co.	Santa Marta, Colombia.	February 5	Iriona	United Fruit Co.	Port Limon, Costa Rica.
February 4	Metapan	United Fruit Co.	New York via Kingston.	February 5	Barneveld	United Netherlands S. S. Co.	Curacao, D. W. I.
February 4	Iriona	United Fruit Co.	New Orleans, La.	February 5	Camden	United States Lines	Curacao via Limon.
February 4	No. 670-M ²⁶	Pan American Airways	Miami via wayports.	February 5	Republie	Pan American Airways	Talara via wayports.
February 4	Dorelian	Leyland S. S. Line	Liverpool via wayports.	February 5	No. 306-N ²⁶	Pan American Airways	New York via wayports.
February 4	No. 9670 ²⁶	Pan American Airways	San Salvador and wayports.	February 5	No. 144-M ²⁶	United Fruit Co.	La Guayra via wayports.
February 4	Inapaguina ²⁷	A. Tagaropoulos	Colon, Rep. of Panama.	February 5	Metapan	United Fruit Co.	Port Limon, Costa Rica.
February 5	U. S. S. Sapelo.	U. S. Navy	Hampton Roads, Va.	February 5	Dorelian	Leyland S. S. Line.	Port Limon, Costa Rica.
February 6	Atlantida	Standard Fruit & S. S. Co.	New Orleans and Habana.	February 5	Pastores	United Fruit Co.	Barranquilla and wayports.
February 6	Bogota	North German Lloyd	New York via Kingston.	February 6	Cordoba C-40 ²⁶	Colombian S. S. Line.	New York via Kingston.
February 6	Iriona	United Fruit Co.	Port Limon, Costa Rica.	February 7	Bogota	United Fruit Co.	New Orleans and wayports.
February 7	Rugia	Hamburg-American Line	Tampico, Mexico.	February 7	Iriona	North German Lloyd	New York, N. Y.
February 7	Samaria	United Fruit Co.	Liverpool via West Indies.	February 7	Berlin	Standard Fruit & S. S. Co.	New Orleans and wayports.
February 7	Parissima	A. Tagaropoulos	New Orleans and Habana.	February 7	Annetta I. ²⁷	A. Tagaropoulos	Colon, Rep. of Panama.
February 7	Annetta I. ²⁷	Pan American Airways	Colon, Rep. of Panama.				
February 7	No. 144-M ²⁶	Pan American Airways	La Guayra via wayports.				
February 7	No. 669-M ²⁶	Pan American Airways	Miami via wayports.				
February 7	No. 9664 ²⁶	Pan American Airways	San Salvador and wayports.				

²⁶ Air mail carrier. ²⁷ Motor boat.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
January 31	Supreme ²⁸	Van Camp Seafood Co.	Panama Bay, R. P.	February 3	Supreme ²⁸	Van Camp Seafood Co.	Panama Bay, R. P.
February 4	Tahchee ²⁹	Standard Transportation Co.	Los Angeles, Calif.	February 6	Tahchee ²⁹	Standard Transportation Co.	Los Angeles, Calif.
February 6	Dos Hermanos ²⁹	A. Valdez	Panama Bay, R. P.	February 6	Dos Hermanos ²⁹	A. Valdez	Panama Bay, R. P.
February 6	El Libertador ²⁹	Hans Elliot.	Panama Bay, R. P.	February 6	El Libertador ²⁹	Hans Elliot.	Panama Bay, R. P.
February 6	Real ²⁹	Hans Elliot.	Panama Bay, R. P.	February 6	Real ²⁹	Hans Elliot.	Panama Bay, R. P.
February 6	Marconi ²⁹	Hans Elliot.	Panama Bay, R. P.	February 6	Marconi ²⁹	Hans Elliot.	Panama Bay, R. P.
February 6	La Union ²⁹	Hans Elliot.	Panama Bay, R. P.	February 6	La Union ²⁹	Hans Elliot.	Panama Bay, R. P.
February 6	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.	February 6	Sambu ²⁹	Hans Elliot.	Panama Bay, R. P.
February 4	Supreme ²⁸	Van Camp Seafood Co.	Panama Bay, R. P.				

²⁸ Tanker. ²⁹ Motor schooner.

* Other than ships passing through the Canal.

Traffic by Nationality for January, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for January, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	7,044	4,567	7,217	4,398	\$5,071.68	.....
British.....	73	401,297	285,543	469,284	285,737	319,231.18	141,917
Chilean.....	2	10,164	6,652	12,658	7,201	8,315.00	3,762
Colombian.....	5	731	712	1,113	716	862.10	707
Danish.....	2	12,905	8,642	13,558	8,763	9,388.17	2,152
Danzig.....	2	14,444	12,399	21,114	11,981	10,399.68	.....
Dutch.....	5	27,044	18,227	30,691	18,399	22,783.75	12,118
French.....	8	39,506	30,814	49,811	30,782	35,384.79	12,219
German.....	16	59,080	42,024	70,084	41,890	50,675.28	33,525
Italian.....	2	13,497	9,879	19,101	10,556	12,348.75	2,878
Japanese.....	7	40,712	33,180	51,647	33,109	41,143.60	30,066
Norwegian.....	13	55,270	36,591	60,770	36,509	43,529.10	44,274
Panamanian.....	2	6,085	3,462	5,764	3,523	4,323.15	4,837
Peruvian.....	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Swedish.....	7	30,291	22,143	55,450	27,155	22,113.26	3,357
United States.....	98	507,225	385,023	624,621	383,497	446,957.76	267,749
Total, January, 1931.....	244	1,228,839	903,368	1,498,244	906,915	1,036,840.05	562,832
Total, January, 1930.....	257	1,279,609	967,089	1,595,694	972,716	1,100,956.12	733,572
Total, January, 1929.....	303	1,385,682	1,062,520	1,748,639	1,069,766	1,179,256.79	759,820

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,030	3,214	4,953	3,169	\$4,017.50	7,250
British.....	61	330,570	245,703	403,425	246,036	305,150.16	398,456
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	9,295
Colombian.....	4	570	550	880	550	671.30	707
Danish.....	4	24,130	16,298	27,730	16,874	20,372.50	36,710
Danzig.....	2	14,444	12,399	21,114	11,981	15,498.75	26,500
Dutch.....	4	21,315	12,528	21,952	12,562	15,660.00	24,018
French.....	6	31,665	22,794	37,649	21,750	28,492.50	43,799
German.....	16	58,104	41,299	71,371	41,803	51,625.00	78,742
Greek.....	1	4,292	2,720	4,349	2,686	3,400.00	8,400
Italian.....	4	28,575	20,324	34,209	22,126	25,405.00	22,431
Japanese.....	7	36,945	32,291	48,700	31,606	39,852.65	39,474
Norwegian.....	17	75,445	52,723	87,909	52,562	65,903.75	115,626
Spanish.....	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Swedish.....	2	9,833	6,604	20,547	8,132	8,255.00	27,535
United States.....	99	495,160	377,900	612,650	377,928	470,618.76	689,982
Yugoslav.....	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total, January, 1931.....	232	1,152,032	860,449	1,420,536	864,294	1,071,300.37	1,544,105
Total, January, 1930.....	274	1,322,019	1,013,224	1,651,237	1,008,859	1,259,255.12	1,878,060
Total, January, 1929.....	300	1,385,598	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,074	7,781	12,170	7,567	\$9,090.18	7,250
British.....	134	731,867	531,246	872,709	532,373	624,381.34	540,373
Chilean.....	4	19,366	13,956	26,273	15,279	17,445.00	13,057
Colombian.....	9	1,301	1,262	1,993	1,266	1,533.40	1,414
Danish.....	6	37,035	24,940	41,288	25,637	29,760.67	38,862
Danzig.....	4	28,888	24,798	42,228	23,962	25,898.43	26,500

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Dutch.....	9	48,359	30,755	52,643	30,961	\$38,443.75	36,136
French.....	14	71,171	53,608	87,460	52,532	63,877.29	56,018
German.....	32	117,184	83,323	141,455	83,693	102,300.28	112,267
Greek.....	1	4,292	2,720	4,349	2,686	3,400.00	8,400
Italian.....	6	42,072	30,203	53,310	32,682	37,753.75	25,309
Japanese.....	14	77,657	65,471	100,347	64,715	80,996.25	69,540
Norwegian.....	30	130,715	89,314	148,679	89,071	109,432.85	159,900
Panamanian.....	2	6,085	3,462	5,764	3,523	4,323.15	4,837
Peruvian.....	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Spanish.....	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Swedish.....	9	40,124	28,747	75,997	35,287	30,368.26	30,892
United States.....	197	1,002,385	762,923	1,237,271	761,425	917,576.52	957,731
Yugoslav.....	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total, January, 1931.....	476	2,380,871	1,763,817	2,918,780	1,771,209	2,108,140.42	2,106,937
Total, January, 1930.....	531	2,601,628	1,980,313	3,246,931	1,981,575	2,360,211.24	2,611,632
Total, January, 1929.....	603	2,771,280	2,117,812	3,470,934	2,122,121	2,502,815.12	2,858,835

Commercial Traffic Through the Panama Canal in January, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of January, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for January, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective trade routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	66	358,104	273,031	441,016	272,935	\$314,398.74	167,097
Europe to west coast of Canada:							
British.....	18	95,144	66,180	107,669	66,452	71,657.47	6,152
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	4,483
French.....	2	12,442	7,814	13,609	8,122	9,767.50	3,900
German.....	3	19,394	12,294	21,105	12,850	14,793.60	9,722
Italian.....	1	5,981	4,365	7,098	4,498	5,456.25	1,279
Norwegian.....	2	11,474	7,984	12,841	8,049	9,980.00	10,740
Swedish.....	1	5,533	3,430	5,554	4,225	4,287.50	3,357
United States.....	1	5,696	4,106	6,601	4,157	5,132.50	2,553
Total.....	30	171,071	116,921	191,942	119,185	134,509.82	42,186
East coast of United States to west coast of South America:							
British.....	10	44,001	36,538	60,035	35,866	32,337.86	1,242
Chilean.....	2	10,164	6,652	12,658	7,201	8,315.00	3,762
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	2,152
Norwegian.....	1	2,025	1,650	2,888	1,678	2,062.50	1,377
Peruvian.....	1	3,544	3,510	5,361	2,699	4,312.80	3,271
Swedish.....	3	13,001	10,418	35,701	12,584	9,360.72	.....
United States.....	10	43,116	30,956	54,805	30,924	36,421.50	20,139
Total.....	28	120,420	92,433	175,920	93,684	96,196.63	31,943
East coast of United States to Far East:							
British.....	6	33,273	19,458	31,906	19,262	24,322.50	27,656
Japanese.....	5	28,692	23,382	36,164	23,002	29,075.55	21,479
Norwegian.....	3	16,588	9,211	15,560	9,293	11,513.75	16,431
United States.....	4	22,980	15,599	25,415	15,580	19,498.75	32,944
Total.....	18	101,533	67,650	109,045	67,137	84,410.55	98,510

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Europe to west coast of South America:							
British.....	4	19,105	14,851	23,830	14,960	\$18,563.75	14,895
Danzig.....	2	14,444	12,399	21,114	11,981	10,399.68	.....
Dutch.....	2	10,895	7,185	12,446	7,244	8,981.25	7,552
French.....	3	13,591	11,864	18,118	11,935	14,697.05	4,723
German.....	4	20,235	15,558	25,036	15,320	19,447.50	15,391
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,599
Swedish.....	1	3,343	2,952	5,349	3,626	2,406.96	.....
Total.....	17	89,129	70,323	117,896	71,124	81,388.69	44,160
Europe to Australasia:							
British.....	14	111,739	76,555	127,533	78,888	94,947.98	52,949
French.....	1	3,681	3,096	5,112	3,079	3,870.00	3,596
Total.....	15	115,420	79,651	132,645	81,967	98,817.98	56,545
Cristobal to west coast of South America:							
Colombian.....	5	731	712	1,113	716	862.10	707
Dutch.....	1	742	294	780	323	367.50	83
German.....	5	4,189	2,878	5,370	2,950	3,597.50	1,048
Total.....	11	5,662	3,884	7,263	3,989	4,827.10	1,838
Europe to west coast of United States:							
Belgian.....	1	7,044	4,567	7,217	4,398	5,071.68	.....
British.....	3	16,793	14,563	20,204	12,772	12,090.96	.....
French.....	1	5,068	4,377	7,011	3,989	3,648.96	.....
German.....	2	11,003	7,618	13,347	7,723	8,241.68	3,875
Panamanian.....	1	6,065	3,447	5,744	3,507	4,308.75	4,837
United States.....	1	4,967	4,568	7,138	3,988	3,582.72	.....
Total.....	9	50,949	39,140	60,661	36,377	36,944.75	8,712
Foreign vessels in ballast— United States inter- coastal:							
British.....	1	4,512	2,857	4,689	2,876	3,248.64	.....
French.....	1	4,724	3,663	5,961	3,657	3,401.28	.....
Norwegian.....	2	9,394	6,583	11,005	6,565	6,606.92	.....
Swedish.....	2	8,414	5,343	8,846	6,720	6,058.08	.....
Total.....	6	27,044	18,446	30,501	19,818	19,314.92	.....
East coast of United States to Australasia:							
British.....	4	24,695	15,427	24,779	15,451	19,283.75	20,440
United States.....	1	5,042	3,674	5,868	3,673	4,592.50	964
Total.....	5	29,737	19,101	30,647	19,124	23,876.25	21,404
East coast of United States to Philippine Islands:							
British.....	2	13,290	7,451	13,395	7,527	9,313.75	9,060
Norwegian.....	1	3,761	2,387	4,014	2,350	2,983.75	4,809
United States.....	2	12,928	9,861	15,359	9,638	12,326.25	10,635
Total.....	5	29,979	19,699	32,768	19,515	24,623.75	24,504
Cristobal to west coast of United States:							
United States.....	5	11,696	9,510	15,853	9,404	9,176.90	1,336
Cristobal to west coast of Central America:							
British.....	4	3,734	3,206	6,001	3,369	4,007.50	2,019
Norwegian.....	1	722	651	990	569	519.84	.....
Total.....	5	4,456	3,857	6,991	3,938	4,527.34	2,019
East coast of United States to west coast of Canada:							
Norwegian.....	1	4,859	2,619	4,444	2,669	3,273.75	.....
United States.....	1	2,617	2,023	3,226	2,030	2,528.75	3,665
Total.....	2	7,476	4,642	7,670	4,699	5,802.50	3,665
East coast of United States to Balboa:							
Norwegian.....	1	722	651	990	569	519.84	.....
United States.....	1	8,272	8,170	10,388	7,886	9,926.40	10,019
Total.....	2	8,994	8,821	11,378	8,455	10,446.24	10,019

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
East coast of Canada to west coast of South America:							
British.....	2	14,483	12,366	22,713	12,035	\$10,427.76	.....
East coast of Canada to Aus- tralia:							
British.....	2	8,605	6,571	10,950	6,694	8,213.75	3,887
West Indies to Balboa:							
Norwegian.....	1	5,725	4,855	8,038	4,767	6,068.75	10,917
United States.....	1	2,235	1,906	2,991	1,739	2,382.50	2,445
Total.....	2	7,960	6,761	11,029	6,506	8,451.25	13,362
Europe to west coast of Cen- tral America:							
German.....	2	4,259	3,676	5,226	3,047	4,595.00	3,489
Cristobal to Balboa:							
Panamanian.....	1	20	15	20	16	14.40	.....
United States.....	1	55	67	98	67	50.25	.....
Total.....	2	75	82	118	83	64.65	.....
Around the world:							
United States.....	2	19,028	14,573	24,661	14,515	18,216.25	5,160
West Indies to west coast of United States:							
Danish.....	1	8,336	5,933	9,086	6,031	6,001.92	.....
East coast of South America to west coast of United States:							
United States.....	1	5,030	3,514	5,515	3,511	4,392.50	3,920
East coast of United States to Hawaii:							
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	6,872
Canadian intercoastal:							
British.....	1	4,108	3,245	5,399	3,333	4,056.25	1,117
East coast of Canada to west coast of United States:							
British.....	1	3,757	3,070	4,968	3,042	3,837.50	2,500
East coast of Canada to Far East:							
Japanese.....	1	4,389	4,357	5,857	4,259	5,266.80	4,733
West Indies to west coast of Canada:							
British.....	1	4,058	3,205	5,213	3,210	2,921.76	.....
East coast of South America to Far East:							
Japanese.....	1	7,631	5,441	9,626	5,848	6,801.25	3,854
Grand total, January, 1931...	244	1,228,839	903,368	1,498,244	906,915	1,036,840.05	562,832
Grand total, January, 1930...	257	1,279,609	967,089	1,595,694	972,716	1,100,956.12	733,572
Grand total, January, 1929...	303	1,385,682	1,062,520	1,748,639	1,069,766	1,179,256.79	759,820

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	72	396,250	300,223	481,688	301,505	\$374,991.45	535,025
West coast of Canada to Europe:							
Belgian.....	1	4,030	3,214	4,953	3,169	4,017.50	7,250
British.....	16	91,055	63,913	103,277	64,116	79,891.25	115,434
Danish.....	1	8,076	5,689	10,110	6,170	7,111.25	9,821
French.....	2	12,125	7,102	13,804	7,486	8,877.50	14,083
German.....	4	24,400	16,114	27,288	16,593	20,143.75	30,192
Italian.....	2	12,594	9,047	14,666	9,328	11,308.75	18,131
Norwegian.....	3	14,758	8,800	14,585	8,936	11,000.00	20,950
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	7,821
Total.....	30	172,488	117,344	194,370	119,248	146,681.25	223,682
West coast of South America to Europe:							
British.....	6	34,459	26,613	44,987	26,650	33,266.25	41,566
Danzig.....	2	14,444	12,399	21,114	11,981	15,498.75	26,500
Dutch.....	3	20,573	12,234	21,172	12,239	15,292.50	23,673
French.....	2	9,000	6,538	10,797	6,528	8,172.50	14,236
German.....	5	22,795	17,160	27,956	17,224	21,450.00	37,216
Greek.....	1	4,292	2,720	4,349	2,686	3,400.00	8,400

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of South America to Europe—Continued:							
Italian.....	2	15,981	11,277	19,543	12,798	\$14,096.25	4,300
Japanese.....	1	4,400	4,357	5,864	4,259	5,280.00	7,748
Norwegian.....	2	4,989	4,007	6,696	4,044	5,008.75	8,684
Spanish.....	1	3,052	2,068	3,518	2,079	2,585.00	5,830
Total.....	25	133,985	99,373	165,996	100,488	124,050.00	178,153
West coast of South America to east coast United States:							
British.....	6	19,849	15,995	26,299	15,924	19,993.75	33,771
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	9,295
Danish.....	1	4,936	2,801	4,617	2,782	3,501.25	8,000
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,650
United States.....	12	44,235	34,356	63,295	34,306	42,302.41	89,427
Yugoslavian.....	1	4,700	3,730	5,965	3,772	4,662.50	9,350
Total.....	23	87,418	67,929	129,128	69,247	84,268.66	171,493
West coast of United States to Europe:							
British.....	7	35,015	29,664	47,310	29,789	36,976.40	52,177
Danish.....	1	6,054	5,058	8,271	5,057	6,322.50	11,667
French.....	1	5,068	4,377	7,011	3,989	5,471.25	8,380
German.....	1	4,340	3,762	8,370	3,658	4,702.50	7,923
Norwegian.....	6	29,021	23,205	38,490	22,833	29,006.25	51,767
United States.....	1	8,619	7,026	11,247	6,933	8,782.50	15,365
Total.....	17	88,117	73,092	120,699	72,279	91,261.40	147,279
Australasia to Europe:							
British.....	13	96,114	67,304	109,749	68,162	84,130.00	82,784
French.....	1	5,472	4,777	6,037	3,747	5,971.25	7,100
Total.....	14	101,586	72,081	115,786	71,909	90,101.25	89,884
West coast of South America to Cristobal:							
Colombian.....	4	570	550	880	550	671.30	707
Dutch.....	1	742	294	780	323	367.50	345
German.....	5	4,232	2,879	5,398	2,974	3,598.75	2,463
Total.....	10	5,544	3,723	7,058	3,847	4,637.55	3,515
Philippine Islands to east coast of United States:							
Japanese.....	3	14,197	13,358	19,244	13,057	16,352.65	20,680
Norwegian.....	1	7,063	4,017	6,744	4,109	5,021.25	4,341
United States.....	2	10,467	8,851	12,748	8,897	11,063.75	15,425
Total.....	6	31,727	26,226	38,736	26,063	32,437.65	40,446
West coast of United States to Cristobal:							
British.....	1	4,633	4,042	6,496	4,047	5,052.50	7,186
United States.....	5	11,696	9,510	15,853	9,404	11,834.45	3,757
Total.....	6	16,329	13,552	22,349	13,451	16,886.95	10,943
Far East to east coast of United States:							
Japanese.....	3	18,348	14,576	23,592	14,290	18,220.00	11,046
United States.....	2	11,176	8,365	12,013	7,389	10,456.25	16,107
Total.....	5	29,524	22,941	35,605	21,679	28,676.25	27,153
West coast Central America to Cristobal:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	948
Norwegian.....	1	722	651	990	569	813.75	1,246
Total.....	4	3,750	3,219	5,821	3,284	4,023.75	2,194
West coast of Canada to east coast of United States:							
British.....	1	5,142	3,532	5,601	3,533	4,415.00	8,300
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,222
United States.....	1	2,617	2,023	3,283	2,001	2,528.75	3,633
Total.....	3	12,823	8,305	13,616	8,399	10,381.25	19,155

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
West coast of United States to West Indies:							
British.....	1	4,373	3,491	5,880	3,453	\$4,363.75	6,974
Norwegian.....	1	5,338	4,528	7,554	4,471	5,660.00	9,869
Total.....	2	9,711	8,019	13,434	7,924	10,023.75	16,843
West coast of South America to east coast of Canada:							
British.....	2	14,483	12,366	22,713	12,035	15,457.50	31,300
Hawaii to Europe:							
British.....	1	4,954	2,834	4,573	2,841	3,542.50	7,084
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	5,885
Total.....	2	10,291	5,695	9,783	6,588	7,118.75	12,969
Far East to Europe:							
Norwegian.....	2	8,246	4,621	7,977	4,616	5,776.25	13,425
Foreign vessels in ballast— United States inter- coastal:							
British.....	1	4,676	2,665	4,347	2,636	3,331.25	.....
Hawaii to east coast of United States:							
United States.....	1	1,740	1,542	2,647	1,542	1,927.50	3,242
Canadian intercoastal:							
British.....	1	4,186	3,322	5,439	3,336	4,152.50	5,934
West coast of Canada to east coast of South America:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	5,344
West coast of Central America to Europe:							
German.....	1	2,337	1,384	2,359	1,354	1,730.00	948
Australasia to east coast of Canada:							
British.....	1	4,195	3,355	5,493	3,347	4,193.75	4,998
West coast of South America to West Indies:							
British.....	1	4,408	4,039	6,430	4,052	3,173.76	.....
Balboa to West Indies:							
United States.....	1	2,235	1,906	2,991	1,739	1,609.20	.....
Balboa to Cristobal:							
United States.....	1	675	633	1,198	742	791.25	180
Grand total, January, 1931...	232	1,152,032	860,449	1,420,536	864,294	1,071,300.37	1,544,105
Grand total, January, 1930...	274	1,322,019	1,013,224	1,651,237	1,008,859	1,259,255.12	1,878,060
Grand total, January, 1929...	300	1,385,598	1,055,292	1,722,295	1,052,355	1,323,558.33	2,099,015

Visit of the Prince of Wales and Brother.

The Prince of Wales and his brother, Prince George, traveling informally, were passengers aboard the steamship *Oropesa* of the Pacific Steam Navigation Co., which arrived at Cristobal from Kingston in the morning of February 6, transited the Canal, and sailed for the west coast of South America at 2 a. m., February 7. The royal visitors landed at Cristobal and flew across the Isthmus, from France Field to Paitilla Field, Panama, in a plane of the Pan American Airways, spent the forenoon in official calls, the afternoon at golf, and in the evening were entertained at dinner by the British Minister at the British Legation, after which they made a short visit to the Union Club, Panama, then continued on the voyage of the *Oropesa*. Their ultimate destination is Buenos Aires.

Tanker Traffic Through the Panama Canal in January, 1931.

During the month of January, 1931, 78 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 423,069, on which tolls of \$391,454.19 were paid. Cargo amounted to 473,266, which included 466,666 tons of mineral oils and 6,600 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 27.8 per cent as compared with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 20.5 per cent.

Tank vessels comprised 16.4 per cent of the total commercial transits through the Canal during the month; made up 17.8 per cent of the total Panama Canal net tonnage; were the source of 18.6 per cent of the tolls collected; and carried 22.5 per cent of the total cargo in transit through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of January, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for January, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	34,043	\$24,510.96	.....
Danzig.....	2	14,444	10,399.68	.....
French.....	1	5,068	3,648.96	.....
German.....	1	4,169	3,001.68	.....
Norwegian.....	2	10,061	9,190.67	10,917
United States.....	20	111,073	88,797.68	34,268
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, November, 1930.....	40	218,894	164,388.02	18,354
Total, January, 1930.....	50	263,292	193,389.62	13,351
<i>Pacific to Atlantic.</i>				
British.....	11	55,433	58,471.41	99,143
Danish.....	1	6,054	6,322.50	11,667
Danzig.....	2	14,444	15,498.75	26,500
French.....	1	5,068	5,471.25	8,380
German.....	1	4,340	4,702.50	7,923
Norwegian.....	6	29,636	31,256.25	53,483
United States.....	24	129,236	130,181.90	* 220,985
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, November, 1930.....	43	238,501	238,306.60	423,487
Total, January, 1930.....	62	322,682	333,566.85	581,928

* Includes 6,600 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during January, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	17	93,069	\$69,972.98	9,878
United States to South America.....	4	21,950	15,804.00	.....
United States to Balboa.....	1	8,272	9,926.40	10,019
United States to Far East.....	1	6,857	6,055.00	11,926
Canada to South America.....	1	7,711	5,551.92	.....
West Indies to Balboa.....	2	7,960	8,451.25	13,862
Europe to United States.....	4	18,595	13,388.40	.....
Europe to South America.....	2	14,444	10,399.68	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	21	114,098	\$115,951.45	199,020
United States to Cristobal.....	1	4,633	5,052.50	7,186
United States to West Indies.....	2	9,711	10,023.75	16,843
United States to Europe.....	13	67,176	71,955.15	122,762
South America to United States.....	1	4,326	4,633.75	7,870
South America to Canada.....	2	14,483	15,457.50	31,300
South America to West Indies.....	1	4,408	3,173.76	.....
South America to Europe.....	3	18,857	20,208.75	36,500
Balboa to West Indies.....	1	2,235	1,609.20	.....
Philippine Islands to United States.....	1	4,284	3,838.75	* 6,600

* Coconut oil.

Of the tanker traffic passing through the Canal in January, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for January, 1931:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
January, 1931.....	22	124,796	\$95,151.23	18,325
December, 1930.....	27	151,619	109,165.68	.....
November, 1930.....	33	181,068	133,889.22	12,576
January, 1930.....	42	226,591	164,917.56	1,140
<i>From Los Angeles.</i>				
January, 1931.....	33	176,803	183,017.85	310,902
December, 1930.....	28	159,849	158,238.75	292,960
November, 1930.....	35	196,698	195,454.10	345,084
January, 1930.....	54	282,283	290,921.90	513,416

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective February 7, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.135
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.15
Oakum, Navy, unspun.....	Lb.	.16
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.36
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.10
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.13
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.12
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.14
Waste, cotton, white.....	Lb.	.16

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.	Panama R. R. S. S. Line.		February 1.		580
Cid.	Pacific Steam Navigation Co.		February 1.		21
Tolosa.	United Fruit Co.	February 1.	February 1.	34	383
Agira.	Roland Line.	February 1.	February 1.	(¹)	183
Witram.	North German Lloyd.	February 1.	February 1.	(¹)	177
Buenos Aires.	Johnson S. S. Line.	February 1.	February 1.	(¹)	129
Champerico.	Pacific Steam Navigation Co.	February 1.		267	
Canada.	Johnson S. S. Line.	February 1.	February 2.	128	(¹)
Corinto.	Panama Mail S. S. Co.	February 1.	February 3.	1,017	(¹)
Lautaro.	Pacific Steam Navigation Co.	February 2.	February 2.	(¹)	57
Rapot.	North German Lloyd.	February 2.	February 2.	8	253
Santa Clara.	Grace Line.	February 2.	February 2.	351	214
Macoris.	French Line.	February 2.	February 3.	57	333
J. M. Danziger.	Pan-American Petroleum Co.	February 2.	February 4.	11,342	(¹)
Durazzo.	Hamburg-American Line.	February 2.		341	
Takaoka Maru.	Nippon Yusen Kaisha.	February 3.	February 4.	123	60
San Francisco.	French Line.	February 3.	February 4.	34	178
Camden.	United Fruit Co.	February 3.	February 5.	7,226	(¹)
Saramacca.	United Fruit Co.	February 3.	February 7.	1,239	(¹)
Axel Johnson.	Johnson Line.	February 4.	February 4.	(¹)	245
Dorelian.	Leyland S. S. Line.	February 4.	February 5.	519	(¹)
Barneveld.	Royal Netherlands S. S. Co.	February 4.	February 5.	$\frac{1}{2}$	1,075
Iriona.	United Fruit Co.	February 4.	February 5.	605	(¹)
Drechtidijk.	Holland-America Line.	February 4.	February 5.	7	290
Pastores.	United Fruit Co.	February 4.	February 5.	364	16 $\frac{1}{2}$
Metapan.	United Fruit Co.	February 4.	February 5.	589	382
Santa Marta.	United Fruit Co.	February 4.	February 5.	15	734
Santa Barbara.	Grace Line.	February 5.	February 6.	213	104
Benjamin Franklin.	Fred Olsen & Co.	February 5.	February 6.	(¹)	663
Tascalusa.	Standard Transportation Co.	February 5.	February 7.	8,723	(¹)
City of Panama.	Panama Mail S. S. Co.	February 5.		1,659	
Manizales.	North German Lloyd.		February 6.		198 $\frac{1}{2}$
Fella.	Nav. Libera Triestina.	February 6.	February 6.	126	(¹)
Albert Voegler.	Hamburg-American Line.	February 6.	February 6.	33	19
Atlantida.	Standard Fruit & S. S. Co.	February 6.	February 7.	316	418
Wyoming.	French Line.	February 6.	February 6.	43	91
Oropesa.	Pacific Steam Navigation Co.	February 6.	February 6.	65	66
Bogota.	United Fruit Co.	February 6.	February 7.	56	$\frac{1}{2}$
Ares.	Royal Netherlands S. S. Co.	February 6.	February 7.	165	85
Caldas.	National Navigation Co.	February 6.	February 7.	300	(¹)
Orita.	Pacific Steam Navigation Co.	February 6.	February 7.	(¹)	201
Swiftwind.	C. D. Mallory & Co.	February 6.		12,362	
Santa Rita.	Grace Line.	February 7.	February 7.	120	228
Iriona.	United Fruit Co.	February 7.	February 7.	90	190
Parismina.	United Fruit Co.	February 7.		463	
Rugia.	Hamburg-American Line.	February 7.		$\frac{1}{2}$	

¹ No cargo discharged.² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending February 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Teresa.	Grace Line.	January 23.	January 24.	1	
La Perla.	United Fruit Co.	January 24.	January 24.		101
Nosa Prince.	N. O. & S. A. S. S. Co.	January 26.	January 26.	60	15
San Jose.	United Fruit Co.	January 26.	January 26.	83	
Charles E. Harwood.	Pan-American Petroleum Co.	January 28.	January 30.	2,532	
Colombia.	Panama Mail S. S. Co.	January 28.	January 28.	52	11
Venezuela.	Panama Mail S. S. Co.	January 28.	January 29.	42	
Manizales.	North German Lloyd.	January 28.	January 28.	1	
Theodore Roosevelt.	Fred Olsen & Co.	January 29.	January 29.		1
Cauca.	National Navigation Co.	January 30.	January 31.		2
Santa Inez.	Grace Line.	January 31.	January 31.	135	5
Takaoka Maru.	Nippon Yusen Kaisha.	February 2.	February 3.	185	
Saramacca.	United Fruit Co.	February 2.	February 3.	89	
Tahchee.	Standard Transportation Co.	February 4.	February 6.	8,300	
Pennsylvania.	Panama-Pacific Line.	February 6.	February 6.		186

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or $1\frac{1}{2}$ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to reconsign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to reconsigning beyond the Isthmus, cargo billed Cristobal for Orders may be reconsigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

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Volume XXIV. Balboa Heights, C. Z., February 18, 1931. No. 29.

Origin and Destination of Cargo Passing Through the Panama Canal During Calendar Year 1930.

Cargo tonnage through the Panama Canal during the calendar year 1930, totaling 27,847,941 tons, showed a decrease of 3,602,552 tons, or 11.5 per cent, in comparison with the previous year. Of this decrease, there was a decline of 2,101,773 tons, or 20.7 per cent, in the Atlantic to Pacific movement, while in the opposite direction tonnage fell off 1,500,770 tons, or 7.1 per cent. The heavy decrease in the former was due to a general decline of practically all the leading commodities usually routed in this direction. While the Pacific to Atlantic showed increases in several commodities, others, particularly nitrates and lumber, registered heavy losses in comparison with 1929.

In another part of this issue (pages 412 to 415) will be found tables showing in detail the origin and destination of all cargo tonnage passing through the Canal in the calendar year ended December 31, 1930. This tonnage, segregated according to direction, as compared with the calendar year 1929, and the decreases and percentages of decrease, are shown in the following tabulation:

	Calendar year, 1929.	Calendar year, 1930.	Decrease.	
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>	<i>Per cent.</i>
Atlantic to Pacific.....	10,166,211	8,064,438	2,101,773	20.7
Pacific to Atlantic.....	21,284,282	19,783,503	1,500,779	7.1
Total.....	31,450,493	27,847,941	3,602,552	11.5

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-four and nine-tenths per cent of the cargo moving from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 25 per cent in Europe, these two areas contributing to about 90 per cent of the cargo moving from the Atlantic to the Pacific. Tonnage originating in the United States decreased 1,372,810 tons, or 20.8 per cent, in comparison with that coming from that area in 1929, although its proportion to the total cargo in this direction was approximately the same in both years. Tonnage from Europe decreased 583,100 tons, or 22.5 per cent, as compared with the previous year, while its proportion to the total was also approximately the same in both years.

Destination.—Forty-two and three-tenths per cent of all cargo moving from the Atlantic to the Pacific was destined to the United States; 22.3 per cent to Asia; 14.8 per cent to South America; and 13.2 per cent to Australasia. Tonnage to all these areas declined in comparison with 1929, as follows: To the United States, 895,176 tons, or 20.8 per cent; to Asia, 300,985 tons, or 14.3 per cent; to South America, 386,067 tons, or 24.5 per cent; and to Australasia, 406,611 tons, or 27.7 per

cent. The proportion of the total cargo destined to Asia was greater in 1930 than in 1929, while that destined to the other areas was slightly less.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 52.8 per cent originated in the United States; 25.0 per cent in South America; 11.5 per cent in Canada; 4.8 per cent in Asia; and 4.8 per cent in Australasia. Tonnage from the United States decreased 487,930 tons, or 4.5 per cent, in comparison with 1929, and that from South America and Canada decreased 1,284,207 tons, or 20.6 per cent, and 4,353 tons, or 0.19 per cent, respectively. In relation to the total cargo, that from the United States and Canada showed slight increases, while that from South America decreased. Tonnage to Asia and Australasia increased 96,027 tons, or 11.2 per cent, and 134,828 tons, or 16.6 per cent, respectively, and also showed increases in their relation to the total cargo.

Destination.—Segregated according to destination, 56.3 per cent of the cargo moving from the Pacific to the Atlantic during the year was destined to the eastern and Gulf seaboard of the United States, and 37.5 per cent to Europe. Tonnage to the United States decreased 935,063 tons, or 7.7 per cent, and to Europe decreased 562,657 tons, or 7.1 per cent. Both these areas absorbed approximately the same proportion of the total cargo in 1930 as in 1929.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

Manufacturers of iron and steel, consisting of 1,661,315 tons, comprised the principal class of cargo from the Atlantic to the Pacific during 1930. With the exception of two items (scrap metal and phosphates) all the leading commodities normally routed in this direction showed decreases in comparison with the previous year owing to depressed business conditions.

From the cargo declarations submitted it was possible to classify approximately 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during 1930. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo." Commodities which aggregated more than 100,000 tons in this direction in either the calendar year 1929 or 1930 are listed in the following tabulation, showing the increase or decrease:

Commodity.	Calendar year, 1929.	Calendar year, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	135,767	112,126	-23,641
Asphalt.....	102,277	87,622	-14,655
Automobiles.....	244,948	137,649	-107,299
Canned goods (fish, fruit, vegetables, etc.).....	122,739	106,405	-16,334
Cement.....	477,734	287,524	-190,210
Coal and coke.....	236,335	157,989	-78,346
Cotton.....	257,508	245,168	-12,340
Manufactured goods:			
Iron and steel.....	2,374,926	1,661,315	-713,611
Machinery.....	195,036	163,043	-31,993
Railroad material.....	221,085	129,275	-91,810
Tinplate.....	287,907	273,401	-14,506
Textiles.....	129,334	107,220	-22,114
Miscellaneous.....	185,382	129,781	-55,601
Metals (iron, lead, etc.).....	119,637	73,732	-45,855
Metal, scrap.....	122,518	143,754	+21,236
Oils, mineral.....	788,556	609,276	-179,280
Paper.....	251,400	234,956	-16,444
Phosphates.....	309,817	424,551	+114,734
Sugar.....	138,182	120,568	-17,614
Sulphur.....	239,147	218,214	-20,933
Tobacco.....	103,023	109,463	+6,440

The above 21 commodity groups comprise approximately 67 per cent of the cargo moving from the Atlantic to the Pacific during the calendar year 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

As in the past several years the heaviest item of cargo moving from the Pacific to the Atlantic was mineral oils, the shipments of which in 1930 totaled 5,521,845 tons, or 27.9 per cent of the total cargo moving in this direction. Lumber, ores, wheat, and nitrates, were next in order with 3,126,877 tons, 2,003,975 tons, 1,839,836 tons, and 1,482,620 tons respectively. With the exception of ores (which made a slight gain), all these items decreased in comparison with the calendar year 1929, the most outstanding of which was in nitrates which declined 1,055,095 tons, or 41.6 per cent. Among the smaller items several increases were made, the more important of which included cold storage products, paper and pulp, and sugar.

Of the cargo reported during the year it was possible to classify 98.5 per cent of the total in transit through the Canal from the Pacific to the Atlantic. Commodities which aggregated more than 100,000 tons either in 1929 or 1930, with the increase or decrease, are listed below:

Commodity.	Calendar year, 1929.	Calendar year, 1930.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	263,729	233,231	-35,498
Beans.....	134,616	108,392	-26,224
Canned goods (fish, fruit, vegetables, etc.).....	847,496	854,290	+6,794
Coffee.....	141,228	150,936	+9,708
Cold storage (food products) *.....	317,914	372,715	+54,801
Copra.....	111,621	94,232	-17,389
Cotton.....	93,497	110,343	+11,846
Flour.....	101,425	117,448	+16,023
Fruit, dried.....	239,451	234,067	-5,384
Fruit, fresh.....	207,361	179,377	-27,984
Lumber.....	3,399,393	3,126,877	-272,516
Metals (principally copper).....	665,755	582,504	-83,251
Nitrates.....	2,537,715	1,482,620	-1,055,095
Oils, mineral.....	5,712,461	5,521,845	-190,616
Ores (principally iron).....	1,993,717	2,003,975	+10,258
Paper.....	78,895	116,534	+37,639
Paper pulp.....	88,341	115,635	+27,294
Rice.....	106,385	105,960	-425
Sugar.....	880,308	921,864	+41,556
Wheat.....	1,901,157	1,839,836	-61,321
Wool.....	157,099	149,117	-7,982

* Fresh fruit not included.

The above 21 commodity groups comprise over 93 per cent of the cargo moving from the Pacific to the Atlantic during the calendar year 1930.

(Continued on next page.)

Large Silk Cargo on California.

An item in THE PANAMA CANAL RECORD of December 3, 1930, reported the growing use of the Panama Canal in the shipment of raw silk from the Orient to the New York market. The master of the *California*, of the Panama Pacific Line, on the last transit of that vessel on February 3, 1931, en route from California to New York, reported 1,723 tons of raw silk as one of the principal items of a total cargo of 7,700 tons. This is believed to constitute the heaviest item of raw silk yet to have passed through the Canal in one transit.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year 1930.—Continued from page 411.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.						
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C.Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.
NORTH AMERICA:												
UNITED STATES—												
North Atlantic ports.....	2,093,237	11,177	30,856	1,049	107,733	2,244,052	132,893	8,260	7,441	52,835	62,266	263,695
South Atlantic ports.....	46,149	5				46,154	2,689	60	18	5	2,358	5,130
Gulf ports.....	556,134	25,118		9,518	810	591,580	30,925	2,411	2,521	4,476	1,745	42,078
Total, United States.....	2,695,520	36,300	30,856	10,567	103,543	2,831,786	166,507	10,731	9,980	57,316	63,369	310,903
East coast of Canada.....	8,965	45,715	175			54,855						
East coast of Central America.....	246		6,895	160		7,301	31,297					31,297
Cristobal, C.Z. ²	36,101	465	52,973	78		89,617	17,865	11,654	9,961	9,154	10,933	59,567
West Indies.....	20,865	41,416	20	10,267		72,568	41,381		18,092	32	11	59,516
Total, North America.....	2,761,697	123,896	90,919	21,072	108,543	3,106,127	237,050	22,385	38,033	66,502	77,313	461,283
EUROPE:												
British Isles.....	67,118	64,138	4,537	66		135,859	130,386	424	3,105	27,612	62,155	223,682
Belgium.....	159,074	28,785	6,478	639	3,140	198,116	58,206	3,176	2,743	9,876	17,284	91,283
Denmark.....	2,614	43	316	5		2,978	383		501	375	1,284	1,493
France.....	25,286	6,093	1,241			32,625	12,632	38	425	1,372	6,274	20,741
Germany.....	70,156	5,125	5,292	1,569	9,477	91,619	21,404	3,814	2,594	9,738	8,759	49,339
Holland.....	44,930	10,760	1,055	1,055		56,745	24,976	597	2,434	12,614	3,400	44,021
Italy.....	12,589	3,707	2,974			19,285	1,077			301	16,983	18,361
Norway and Sweden.....	63,967	1,575	13,649	12,578	4	91,773	30,092	4,058	3,132	1,830	21,116	60,228
Spain and Portugal.....	3,829	10,148	799	1,567		16,343	362			169		1,287
Europe ¹	85,720	11,626	11,684	1,492		110,522	28,893	2,367	1,300	7,358	177,285	217,203
Total, Europe.....	535,283	142,005	43,970	18,986	12,621	755,865	311,411	14,474	16,234	71,295	314,226	727,640
East coast of South America.....	117,090	34,613	91	106		152,500		2,495	35		474	3,004
Africa.....												
Grand total, 1930.....	3,414,670	300,514	137,930	40,164	121,164	4,014,492	568,461	39,354	54,302	137,797	392,013	1,191,927
Grand total, 1929.....	4,309,816	278,163	260,668	50,063	123,862	5,022,602	734,407	100,391	44,816	217,326	481,034	1,577,994
Per cent of total cargo, 1930.....	42.3	3.7	1.7	0.5	1.5	49.7	7.0	0.5	0.7	1.7	4.9	14.8
Per cent of total cargo, 1929.....	42.4	2.7	2.6	0.5	1.2	49.4	7.2	1.0	0.4	2.1	4.7	15.4

¹ General cargo not routed so as to allow segregation between definite ports.
² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Atlantic to the Pacific, During the Calendar Year 1930.

(Figures represent tons of 2,240 pounds.)

From—	AUSTRALASIA.				ASIA.				GRAND TOTAL.		Per cent of total cargo 1930.	Per cent of total cargo 1929.	
	Australia.	New Zealand.	Australasia.	Total Australasia.	Philippine Islands.	China.	Japan.	Far East.	Total Asia.	1930.			1929.
NORTH AMERICA:													
UNITED STATES—													
North Atlantic ports.....	139,925	60,790	7,354	208,069	138,689	219,284	330,757	194,645	833,375	3,599,191	4,721,434	44.6	46.4
South Atlantic ports.....	798	1,605	2,403	2,403	2,300	12,687	64,996	11,441	91,424	145,111	141,714	1.8	1.4
Gulf ports.....	63,461	18,332	12,627	94,420	8,780	129,877	470,234	155,311	764,222	1,492,300	1,746,264	18.5	17.9
Total, United States.....	204,184	80,727	19,931	304,892	149,769	361,843	866,007	361,397	1,739,021	5,236,602	6,009,412	64.9	65.0
East coast of Canada.....	29,435	53,092	7,599	95,126		4,012	7,941		11,953	161,934	226,362	2.0	2.2
East coast of Central America.....	56,268	129	7,500	63,597					102,195	99,301	99,301	1.3	1.0
Cristobal, C. Z. ¹	1		101	102		5	11		16	149,302	246,985	1.8	2.4
West Indies.....		48,432	7,100	55,532		13,060			13,060	200,676	199,541	2.5	2.0
Total, North America.....	289,888	187,380	41,931	519,249	149,769	378,925	873,959	361,397	1,764,050	5,850,709	7,381,601	72.5	72.6
EUROPE:													
British Isles.....	8,296	413,203	21,801	413,300				7,800	7,800	810,641	1,008,976	10.1	9.9
Belgium.....	1,800	43,650		45,450		777		12	789	335,640	526,918	4.2	5.2
Denmark.....			2	2						4,473	9,579	0.1	0.1
France.....			12,159	12,159						65,525	94,306	0.8	0.9
Germany.....			16	16						140,974	222,781	1.7	2.2
Holland.....						767			767	101,533	109,063	1.2	1.0
Italy.....										37,646	46,662	0.5	0.5
Norway and Sweden.....	11,232	5,080		16,312						168,313	213,011	2.1	2.1
Spain and Portugal.....										17,630	11,689	0.2	0.1
Europe ¹			2,862	2,862						330,587	353,077	4.1	3.5
Total, Europe.....	21,328	461,983	36,840	520,101		1,544		7,812	9,356	2,012,962	2,596,062	25.0	25.5
East coast of South America.....													
Africa.....		21,983		21,983	66	392	7,260	22	7,740	163,244	152,971	2.0	1.5
							15,540		15,540	37,523	35,577	0.5	0.4
Grand total, 1930.....	311,216	671,206	78,821	1,061,333	149,835	380,861	896,759	369,231	1,796,686	8,064,438		100.0	
Grand total, 1929.....	531,988	848,362	87,594	1,467,944	202,150	437,034	1,092,732	315,705	2,097,671	10,166,211		100.0	
Per cent of total cargo, 1930.....	3.9	8.3	1.0	13.2	1.9	4.7	11.1	4.6	22.3			100.0	
Per cent of total cargo, 1929.....	5.2	8.4	0.9	14.5	2.0	4.8	10.8	3.1	20.7			100.0	

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year 1930.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.						EUROPE.							
	United States.				East coast of Canada.	East coast of Central America.	Cristobal, C. Z. *	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.										
NORTH AMERICA:														
West coast of United States...	6,368,880	96,492	400,856	6,866,178	15,520	42,790	226,398	7,160,321	1,745,478	53,500	11,806	158,801	308,800	
West coast of Canada...	328,475		3,519	331,994	9,435	630	44,030	501,773	833,331	41,005	9,690	29,275	65,765	
West coast of Central America	4,681			4,681	123,359	52,641	2,199	59,584	1,011			3,559	8,267	
Bahia, C. Z.	308		634	942	63	229		1,171						
Hawaiian Islands...	73,013		43,000	116,013				116,013	1,952	278	159			
Total, North America...	6,775,307	96,492	448,009	7,319,808	133,794	96,290	272,627	7,838,862	2,581,772	94,783	21,655	191,035	382,882	
SOUTH AMERICA:														
Chile...	1,913,716	171,496	157,588	2,242,800	2,454	6,365	22,644	2,274,263	206,908	43,806	2,972	46,091	42,808	
Colombia...	17,635		1,481	19,116		40,137	176	59,429		3		93	159	
Ecuador...	161,245			161,249		31,902	66	203,927	840	42	66	1,484	1,445	
Peru...	270,074		4,004	277,008	15,710	2,242	198	583,718	157,087	18,555	7,617	24,983	75,291	
West coast of South America	15,839	2,000		17,839	305,965	13,013	207	31,059	11,761	321	1,307	53	1,546	
Total, South America...	2,378,509	176,426	163,077	2,718,012	321,675	93,659	23,291	3,159,396	376,596	62,727	11,962	72,704	121,249	
AUSTRALASIA:														
Australia...	176,491			176,491	17,412	82		183,985	15,457			5,000	1,048	
New Zealand...	22,827	10,238		33,065	9,664	468		43,197	496,207	4		15,621	65	
Australasia *	62,414		4,400	66,814				66,814	50,672	4,540				
Total, Australasia...	261,732	10,238	4,400	276,370	27,076	550		303,996	562,336	4,544		20,621	1,113	
ASIA:														
Philippine Islands...	549,645		144,437	694,082				694,082						
China...	50,027		1,229	51,256		6,674	15,060	72,990	850					
Japan...	55,767		2,589	59,375			9,350	69,615						
Far East *	24,458		394	24,852	166	208	51,712	76,938	40,945					
Total, Asia...	679,897	1,019	148,649	829,565		7,772	76,122	913,625	41,795					
Grand total, 1930...	10,095,445	284,175	764,135	11,143,755	482,545	198,271	372,040	12,215,879	3,562,499	162,034	33,617	284,960	505,194	
Grand total, 1929...	10,643,267	425,852	1,009,699	12,078,818	576,788	199,516	276,285	13,155,226	3,596,777	252,431	67,910	373,833	590,758	
Per cent of total cargo, 1930...	51.0	1.4	3.9	56.3	2.4	1.6	1.9	61.7	18.0	0.8	0.2	1.4	2.6	
Per cent of total cargo, 1929...	50.0	2.0	4.7	56.7	2.8	0.9	1.3	61.8	16.9	1.2	0.3	1.8	2.7	

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal, from the Pacific to the Atlantic, During the Calendar Year 1930.

(Figures represent tons of 2,240 pounds.)

From—	Europe.							East coast of South America.	Egypt.	Africa.	Grand Total.		Per cent of total cargo 1930.	Per cent of total cargo 1929.
	Holland.	Italy.	Norway and Sweden.	Russia.	Spain and Portugal.	Europe.	Total Europe.				1930.	1929.		
NORTH AMERICA:														
West coast of United States...	121,262	39,989	42,122	5,285	7,220	711,498	3,205,761	65,181	601	5,342	10,437,206	10,925,136	52.8	51.3
West coast of Canada...	70,470	18,027	55,127		26,051	587,827	1,746,568	18,890		3,520	2,270,751	2,275,104	11.5	10.7
West coast of Central America	641	658	5,144		13,800	6,275	39,355	504			99,443	91,050	0.5	0.4
Bahama, C. Z.								180			1,331			
Hawaiian Islands.	500	447					3,336				119,349	84,237	0.6	0.4
Total, North America...	192,873	59,121	102,393	5,285	47,071	1,315,600	4,995,020	84,755	601	8,862	12,928,100	13,375,527	65.4	62.8
SOUTH AMERICA:														
Chile...	6,318	10,849	6,075	64,820	1,974	794,812	1,227,433	684	70,254		3,572,634	4,756,630	18.1	22.3
Colombia...					400	23	678	4			60,111	63,376	0.3	0.3
Ecuador...	372	4,047	137		238	4,411	13,082	861			222,870	194,847	1.1	0.9
Peru...	16,608	596	40,037		551	110,965	452,290	8			1,038,016	1,140,416	5.2	5.4
West coast of South America		796				12,706	28,490				59,549	82,118	0.3	0.4
Total, South America...	23,298	16,288	46,249	64,820	3,163	922,917	1,721,973	1,557	70,254		4,953,180	6,237,387	25.0	29.3
AUSTRALASIA:														
Australia...														
New Zealand...	891		20,000			8,650	526,800	3			214,445	141,315	1.1	0.7
Australasia						23,718	94,616				569,997	520,440	2.9	2.4
Total, Australasia...	891		20,000			32,368	611,873	3			161,430	146,289	0.8	0.7
ASIA:														
Philippine Islands...														
China...							850				694,082	597,582	3.5	2.9
Japan...											73,840	95,472	0.4	0.4
Far East							40,945	931			69,615	45,468	0.3	0.2
Total, Asia...											118,814	121,802	0.6	0.6
Total, Asia...							41,795	931			956,351	860,324	4.8	4.1
Grand total, 1930...	217,062	75,409	168,642	70,105	50,234	2,270,885	7,400,661	87,246	70,855	8,862	19,783,503		100.0	
Grand total, 1929...	297,122	103,062	147,889	10,907	123,247	2,399,382	7,963,318	59,384	100,009	6,345		21,284,282		100.0
Per cent of total cargo, 1930...	1.1	0.4	0.9	0.4	0.3	11.4	37.5	0.4	0.4				100.0	
Per cent of total cargo, 1929...	1.4	0.5	0.7	0.1	0.6	11.2	37.4	0.3	0.5				100.0	

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 14, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Salt Lake City 2	7	7 05	8	00 50	8	12 48			American.	U. S. Navy.	570.0	64.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Antares 3	7	9 25	8	2 10	8	11 57			American.	U. S. Navy.	390.0	62.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Pensacola 3	7	7 05	8	4 25	8	13 53			American.	U. S. Navy.	370.0	64.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Steel Scientist.	7	22 25	8	5 25	8	14 58			American.	Isthmian S. S. Lines.	424.2	56.2	26.11	Philadelphia, Pa.	Singapore Str. Set.	General.	7,946	7,611 5,454
Trenton 2	7	7 05	8	6 40	8	15 50			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Memphis 3	7	7 05	8	7 30	8	16 44			American.	U. S. Navy.	550.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Tai Ping Yang 2	8	1 40	8	8 45	8	17 12			Panamanian	Barber Wilhelms Line	460.0	60.0	19.0	New York, N. Y.	Shanghai, China.	General.	2,187	9,866 6,955
Marblehead 2	7	7 05	8	9 25	8	17 46			American.	U. S. Navy.	530.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Richmond 2	7	7 05	8	10 15	8	18 30			American.	U. S. Navy.	530.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Enslay City.	8	5 25	8	10 50	8	19 15			American.	Isthmian S. S. Lines.	385.0	55.0	20.6	Baltimore, Md.	Vancouver, B. C.	General.	4,791	7,330 5,239
Swiftwind 2	8	14 55	8	11 20	8	20 05			American.	Shell Oil Co.	464.6	60.2	19.2	Cartago, D. W. I.	Los Angeles, Calif.	Ballast.	8,473	6,050
Far.	8	7 25	8	12 30	8	20 58			Norwegian.	Inter-Freighting Corp.	399.0	53.0	20.0	Baltimore, Md.	Ancon, Peru.	General.	3,500	6,199 4,513
Trimountain 2	8	9 25	8	13 30	8	22 55			American.	Bernuth Lemboke Co.	416.0	59.0	23.6	Amsterdam, Holland	San Francisco, Cal.	Oreore.	8,327	6,728 4,734
Panama 4	5	23 45	8	14 10	8	23 00			American.	Panama Mail S. S. Co.	296.1	45.0	17.10	Cristobal, C. Z.	Buenaventura, Col.	General.	1,012	3,848 2,603
Bobolink 4	7	9 25	9	4 10	9	12 20			American.	U. S. Navy.	180.0	36.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Vestal 6	7	9 25	9	4 25	9	12 26			American.	U. S. Navy.	490.0	60.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Detroit 2	7	2 30	9	6 20	9	14 04			American.	U. S. Navy.	530.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Wright 7	7	2 30	9	6 35	9	15 12			American.	U. S. Navy.	438.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Raleigh 7	7	7 05	9	7 48	9	16 12			American.	U. S. Navy.	530.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Milwaukee 2	7	7 05	9	8 45	9	17 30			American.	U. S. Navy.	530.0	55.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Port Brisbane.	9	4 00	9	9 40	9	17 56			British.	Comth & Dom. Line.	481.0	62.0	23.2	New York, N. Y.	Buenaventura, Col.	General.	1,399	10,708 7,934
Contocook 2	7	9 35	9	9 20	9	17 27			American.	U. S. Navy.	149.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Rail 5	7	9 35	9	9 20	9	17 27			American.	U. S. Navy.	180.0	35.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Breckenridge No. 148 9	7	9 00	9	10 50	9	18 34			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Grownnsfield No. 134 9	7	9 25	9	10 50	9	18 34			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Barbara Cates.	8	22 05	9	10 40	9	19 54			American.	Sudden & Christenson.	409.3	54.2	17.0	Baltimore, Md.	Seattle, Wash.	General.	2,362	6,604 4,852
Yorkman.	9	9 00	9	11 35	9	21 01			American.	Calmar S. S. Line.	493.8	54.2	23.0	Baltimore, Md.	Seattle, Wash.	Steel, general.	6,680	6,757 4,802
Robin 2	9	11 15	9	12 35	9	21 04			American.	U. S. Navy.	180.0	35.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Manley No. 74 9	7	9 00	9	12 35	9	21 40			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Dallas No. 199 9	7	9 00	9	12 35	9	21 40			American.	U. S. Navy.	310.0	30.0		Guantanamo, Cuba	Balboa, C. Z.	Ballast.		
Pont Gorda.	9	10 10	9	12 45	9	21 50			American.	Swayne & Hoyt.	324.0	46.0	21.0	Corpus Christi, Tex.	Seattle, Wash.	Ballast.	3,308	3,984 2,643
City of Dieppe.	9	10 30	9	13 45	9	22 34			British.	Ellerman & Bucknall.	465.0	58.0	25.0	New York, N. Y.	Sydney, Australia.	General.	1,298	9,321 6,789
Cauca 4	8	19 50	9	13 35	9	22 40			Colombian.	National Navigation Co.	107.0	22.0	8.6	Cristobal, C. Z.	Buenaventura, Col.	General.	93	262 161

* Tanker.

* Auxiliary.

* Motor ship.

* Mine sweeper.

* Repair ship.

* Aircraft tender.

* Destroyer.

* Lumber, pipe and general.

Ellis No. 154 *	7	.....	10 00.35	10 9.32	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
J. Fred Talbot	7	.....	10 00.35	10 9.32	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 156 *	7	.....	10 00.35	10 9.32	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Bernadou	7	.....	10 00.45	10 9.40	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 153 *	7	.....	10 00.45	10 9.40	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Cole No. 155 *	7	.....	10 00.45	10 9.40	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Hopkins	7	.....	10 00.45	10 9.40	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 249 *	7	.....	10 2.20	10 12.35	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Schenck	7	.....	10 2.20	10 12.35	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 150 *	7	.....	10 2.20	10 12.35	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Herbert	7	.....	10 2.40	10 12.55	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 160 *	7	.....	10 2.40	10 12.55	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Dickenson	7	.....	10 2.40	10 12.55	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 157 *	7	.....	10 4.00	10 13.47	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Barry No. 248 *	7	.....	10 4.00	10 13.47	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Williamson	7	.....	10 4.03	10 13.47	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 244 *	7	.....	10 4.15	10 13.57	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Childs No. 241 *	7	.....	10 4.15	10 13.57	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Gilmer No. 233 *	7	.....	10 4.15	10 13.57	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Concord *	7	.....	10 5.55	10 14.46	.....	U. S. Navy	555.0	55.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Hale No. 133 *	7	.....	10 12.30	10 20.22	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Barney	7	.....	10 12.30	10 20.22	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
No. 149 *	7	.....	10 12.30	10 20.22	.....	U. S. Navy	310.0	30.0	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Quails	7	.....	10 9.00	10 17.50	.....	U. S. Navy	180.0	35.6	.....	Cristobal, C. Z.	Balboa, C. Z.	Ballast	.....
Santos Maru *	9	17.55	10 7.20	10 16.15	10 17.50	Osaka Shosen Kaisha	430.7	53.0	21.8	Cristobal, C. Z.	Balboa, C. Z.	Ballast	3.476 7.875 5.821
Brilliant *	10	6.45	10 8.30	10 16.39	10 17.50	Standard Transp. Co.	480.0	66.0	19.0	Buenos Aires, Arg.	Kobe, Japan	General	9.772 6.712
Pacific Fir	10	7.25	10 8.48	10 17.45	10 18.50	Dimon S. S. Corp.	410.5	54.0	22.0	Boston, Mass	Los Angeles, Calif	Ballast	4.489 8.624 4.883
Schwaben	10	6.20	10 10.30	10 18.17	10 19.30	North German Lloyd	491.0	63.8	21.7	Philadelphia, Pa.	Tacoma, Wash.	General	2.555 10.002 6.743
Knut Nelson *	10	6.20	10 11.10	10 18.55	.....	Fred Olsen & Co.	436.0	56.2	20.2	Hamburg, Germany	Vancouver, B. C.	General	3.986 8.016 5.854
Euador	9	12.15	10 12.55	10 20.39	11 13.40	Amreian	330.6	48.7	21.3	Oslø, Norway	Vancouver, B. C.	General	2.551 5.926 4.178
Annie Johnson *	10	20.45	11 1.45	11 9.23	11 19.30	Panama Mail S. S. Co.	392.2	52.6	18.2	New York, N. Y.	San Francisco, Cal.	General	2.257 6.650 4.919
Lark *	10	10.55	11 1.45	11 9.23	11 19.30	Johnson Line	392.2	52.6	18.2	Stockholm, Sweden	Vancouver, B. C.	General	2.257 6.650 4.919
Atlantic Maru	10	22.05	11 3.45	11 11.25	11 12.20	U. S. Navy	180.0	35.6	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Nablin *	9	23.20	11 6.15	11 12.54	.....	Kokusa Kisen Kaisha	385.0	51.0	22.0	Jacksonville, Fla.	Shanghai, China	Cotton, rosin	4.391 6.251 4.700
Baral	10	00.15	11 6.05	11 13.53	11 16.20	Lady Yule	258.0	36.0	16.0	Greenock, England	Galapagos Island	Ballast	1.491 551
Hawaiian	11	4.55	11 6.40	11 14.13	11 15.25	Royal Neth. S. S. Co.	200.0	33.0	11.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	26 1.183 742
West Nilus	11	5.00	11 7.35	11 15.23	11 16.30	Amer-Havarian Line	404.6	53.9	18.0	Boston, Mass	Seattle, Wash.	General	2.274 4.767
Robert	11	6.05	11 8.40	11 16.30	11 19.30	McCormick S. S. Co.	410.0	54.3	20.0	Rosario, Arg.	Vancouver, B. C.	General	3.753 6.551 4.989
Lukenbach	11	6.05	11 8.40	11 16.30	11 19.30	Lukenbach Line	445.0	53.0	19.10	Boston, Mass	Seattle, Wash.	General	3.444 8.695 6.375
Teal *	10	19.42	11 8.45	11 16.30	11 19.30	U. S. Navy	180.0	35.6	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Cornwall	11	9.40	11 9.55	11 21.05	12 1.40	N. Z. Shipping Co.	495.0	63.0	31.4	Antwerp, Belgium	Balboa, C. Z.	Basic slag	9.476 12.217 8.519
Nuria	11	1.05	11 14.40	11 22.40	11 23.58	North German Lloyd	450.0	53.0	19.0	Hamburg, Germany	Valparaiso, Chile	General	1.797 7.756 5.378
Lochmonar *	11	8.25	11 15.20	12 1.05	12 4.53	Royal Mail S. P. Co.	485.0	62.2	20.7	Rotterdam, Holland	Vancouver, B. C.	General	2.569 10.772 7.581
Reginoltte *	11	20.10	11 20.25	12 9.42	12 14.40	Imperial Oil Co.	471.0	63.0	20.0	Baltimore, Md	Los Angeles, Calif	Ballast	9.328 5.513
Sandpaper *	12	3.30	12 6.10	12 12.50	.....	U. S. Navy	180.0	35.6	.....	Guantanamo, Cuba	Balboa, C. Z.	Ballast	.....
Hazel Branch	12	7.20	12 9.40	12 17.47	13 23.45	F. & W. Ritson	400.0	51.2	16.11	Liverpool, England	Valparaiso, Chile	General	1.270 5.208 3.578
Oregon	12	00.40	12 11.10	12 18.12	12 19.30	French Line	468.0	61.3	17.0	Dunkirk, France	Vancouver, B. C.	General	1.802 10.332 7.466
San Julian	12	6.30	12 14.35	12 22.39	12 23.43	Pacific-Atlantic Co.	468.0	58.5	20.4	London, England	Vancouver, B. C.	General	4.840 8.400 6.162
Caldas *	10	13.10	12 14.25	12 23.10	13 1.50	National Navigation Co.	116.0	21.1	10.0	Bocas R. P.	Buenaventura, Col	Gen. steel ties	249 8.211 124
Nuolja *	12	14.40	12 15.50	12 23.10	13 00.10	Grangesberg & Co.	418.0	55.7	14.6	New Orleans, La.	Vancouver, B. C.	Ballast	7.265 5.199

* Yacht.

** Cement, paper, and general.

* Tanker

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 8	Kungsholm	Swedish-American Line.	New York via wayports.	February 8	Rugia	Hamburg-American Line	Cartagena, Colombia.
February 8	Dorelian	Leyland S. S. Line.	Port Limon, Costa Rica.	February 8	No. 9855 ²⁶	Pan American Airways.	San Salvador and wayp ts
February 8	Duchess of Richmond	Canadian-Pacific R. R. Co.	Liverpool via wayports.	February 8	No. 670-M ²⁶	Pan American Airways.	Miami via wayports.
February 8	Pastores	United Fruit Co.	Port Limon, Costa Rica.	February 8	P. S. S. Sapelo	United Fruit Co.	Beaumont, Tex.
February 8	Teutonia	Hamburg-American Line.	Hamburg via wayports.	February 8	Pastores	United Fruit Co.	New York via Habana.
February 9	Reliance	Hamburg-American Line.	Barranquilla and wayp ts.	February 8	Parismira	United Fruit Co.	New Orleans and wayp ts.
February 9	Cundinamarca C-33 ²⁶	Swedish-American Line.	Southampton via wayp ts.	February 8	Dorelian	Leyland S. S. Line.	Liverpool via wayports.
February 10	Statenland	Royal Netherlands S. S. Co.	Amsterdam via wayports.	February 8	Teutonia	Hamburg-American Line.	Southampton via wayp ts.
February 10	Simon Bolivar	Pan American Airways	Talara via wayports.	February 9	Duchess of Richmond	Canadian-Pacific R. R. Co.	Port Limon, Costa Rica.
February 11	Cayana	Elders & Wyffels, Ltd.	Avonmouth via wayports.	February 9	Pearl Marie ²³	G. I. Bryn	Bluefields, Nicaragua.
February 11	Cristobal	Panama R. R. S. S. Line.	New York via Haiti ports.	February 9	Kunsholm	Swedish-American Line	New York via wayports.
February 11	Tela	United Fruit Co.	New York via Kingston.	February 10	Reliance	Hamburg-American Line	New York via wayports.
February 11	Skjala	Pan American Airways	New Orleans, La.	February 11	Simon Bolivar	Royal Netherlands S. S. Co.	Avonmouth via wayports.
February 11	Convallaria	Aluminum Line	Miami via wayports.	February 11	No. 9684 ²⁶	Pan American Airways	Port Limon, Costa Rica.
February 11	Inapaquina ²⁷	Pan American Airways	Tampa, Fla.	February 11	Statenland	Pan American Airways	San Salvador and wayp ts.
February 12	Tela	United Fruit Co.	San Salvador and wayp ts.	February 12	Tela	Holland-America Line.	Miami via wayports.
February 12	Skjala	Swedish-American Line	Colon, Rep. of Panama.	February 12	Inapaquina ²⁷	A. Tagaropolis	New York via wayports.
February 12	Convallaria	United Fruit Co.	Bocas, Rep. of Panama.	February 12	No. 945-M ²⁶	United Fruit Co.	Colon, Rep. of Panama.
February 12	Skjala	Swedish-American Line	New Orleans and wayp ts.	February 12	No. 309-N ²⁶	Pan American Airways	Talara via wayports.
February 12	Skjala	Swedish-American Line	New York via wayports.	February 12	Skjala	Pan American Airways	Cartagena, Colombia.
February 12	Skjala	Swedish-American Line	Southampton via wayp ts.	February 12	Ulua	United Fruit Co.	Port Limon, Costa Rica.
February 12	Skjala	Swedish-American Line	Port Limon, Costa Rica.	February 12	Convallaria	Aluminum Line.	Kingsion, Jamaica.
February 13	Simon Bolivar	Royal Netherlands S. S. Co.	Cartagena via wayp ts.	February 13	Cundinamarca C-33 ²⁶	Swedish Airplane Co.	Barranquilla and wayp ts.
February 13	No. 309-N ²⁶	Pan American Airways	Miami via wayports.	February 13	Martinique	Colombian S. S. Line	New Orleans and wayp ts.
February 13	No. 670-M ²⁶	Pan American Airways	San Salvador and wayp ts.	February 14	Tela	United Fruit Co.	New York via wayports.
February 14	No. 9564 ²⁶	Pan American Airways	Talara via wayports.	February 14	Vestvangeren	Aluminum Line.	Cartagena, Colombia.
February 14	No. 945-M ²⁶	Pan American-Grace Airways	New Orleans and wayp ts.	February 14	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam and wayp ts.
February 14	Cartago	United Fruit Co.	Colon, Rep. of Panama.	February 14	Amapala	Standard Fruit & S. S. Co.	New Orleans and wayp ts.
February 14	Annetta I. ²⁷	A. Tagaropolis.	Colon, Rep. of Panama.	February 14	Arandora Star	Blue Star Line.	Madaira and wayports.

²⁶ Air mail carrier. ²⁷ Motor boat. ²⁸ Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
February 9	Real ³⁰	Hans Elliot.	Panama Bay, R. P.	February 9	Siprenee ²⁹	Van Camp Seafood Co.	Panama Bay, R. P.
February 10	Shabonee ¹	Standard Oil Co., N. Y.	Los Angeles, Calif.	February 9	Real ³⁰	Hans Elliot.	Panama Bay, R. P.
February 12	Rakuyo Maru	Nippon Yusen Kaisha.	Buenaventura, Colombia.	February 12	Shabonee ¹	Standard Oil Co., N. Y.	Los Angeles, Calif.
February 12	Rakuyo Maru	Nippon Yusen Kaisha.	Hongkong, China.	February 13	City of Panama ²⁹	Panama Mail S. S. Co.	Panama, Calif.
February 12	Real ³⁰	Hans Elliot.	Panama Bay, R. P.	February 13	Rakuyo Maru	Nippon Yusen Kaisha.	Valparaiso, Chile.
February 12	Hans Elliot.	Hans Elliot.	Panama Bay, R. P.	February 13	Real ³⁰	Marconi ³⁰	Panama Bay, R. P.
February 12	Marconi ³⁰	Hans Elliot.	Panama Bay, R. P.	February 12	Marconi ³⁰	Hans Elliot.	Panama Bay, R. P.
February 12	Sambu ³⁰	Hans Elliot.	Panama Bay, R. P.	February 13	Sambu ³⁰	Hans Elliot.	Panama Bay, R. P.

²⁹ Motor ship. ³⁰ Motor schooner.

* Other than ships passing through the Canal.

Salt-water Draft of Vessels Transiting Canal in 1930.

During the calendar year 1930, the average salt-water draft of vessels making the 2,956 commercial transits of the Panama Canal from the Atlantic to the Pacific was 20.4 feet. From the Pacific to the Atlantic, the average draft of the 2,929 commercial vessels was 24.2 feet. The average draft of the total commercial transits during the year, 5,885, was 22.4 feet.

In the following tabulation is shown the salt-water draft of vessels through the Canal during 1930, separated in 1-foot intervals and segregated by direction of transit, with the averages for 1930, 1929, and 1928:

Draft.	Atlantic to Pacific.	Pacific to Atlantic.	Total.	Percentage of total.
Under 10 feet.....	48	32	80	1.36
10 to 11.....	23	18	41	.70
11 to 12.....	19	16	35	.59
12 to 13.....	37	27	64	1.09
13 to 14.....	45	36	81	1.38
14 to 15.....	50	56	106	1.80
15 to 16.....	87	34	121	2.06
16 to 17.....	114	38	152	2.58
17 to 18.....	181	36	217	3.69
18 to 19.....	292	40	332	5.64
19 to 20.....	304	56	360	6.12
20 to 21.....	342	63	405	6.88
21 to 22.....	294	86	380	6.46
22 to 23.....	244	129	373	6.34
23 to 24.....	247	242	489	8.31
24 to 25.....	199	363	562	9.55
25 to 26.....	143	399	542	9.21
26 to 27.....	125	419	544	9.24
27 to 28.....	81	342	423	7.19
28 to 29.....	38	214	252	4.28
29 to 30.....	20	124	144	2.45
30 to 31.....	15	65	80	1.36
31 to 32.....	6	26	32	.54
32 to 33.....	2	7	9	.15
33 to 34.....		12	12	.20
34 to 35.....		23	28	.47
35 to 36.....		21	21	.36
Total.....	2,956	2,929	5,885	100.00
Average, 1930.....	20.4	24.2	22.4	.....
Average, 1929.....	20.9	24.2	22.5	.....
Average, 1928.....	20.3	24.3	22.2	.....

The transit of vessels of the greatest draft through the Canal in 1930 was that of the *Marore* in March, and of the *Chilore* in June, each drawing 36 feet, carrying iron ore from Chile to the United States. From the Atlantic to the Pacific, the transit of the vessel with the greatest draft was that of the *Virginia*, in February, drawing 32 feet.

It will be noted that the average draft of vessels transiting the Canal from the Pacific to the Atlantic is greater than of vessels passing through in the opposite direction. This is accounted for by the fact that the Pacific-to-Atlantic traffic is made up to a great extent of vessels carrying capacity cargoes, such as mineral oils, iron ore, wheat, nitrates, and other bulk products, while the Atlantic-to-Pacific traffic is composed largely of vessels carrying miscellaneous manufactured goods which either are essentially not so heavy or else do not permit the fullest use of stowage space of the vessels, and by far the greater proportion of the transits in ballast are included in the Atlantic-to-Pacific traffic.

United States Intercoastal Traffic by Commodities for January, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for January, 1931, and the totals for January, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	971		971
Alfalfa.....		595	595
Alfalfa meal.....		619	619
Ammonia.....		15	15
Asbestos.....	139		139
Asphalt.....	135	94	229
Automobiles.....	1,744	79	1,823
Automobile accessories.....	230	38	263
Bamboo.....		26	26
Bark.....		280	280
Beans.....	15	9,614	9,629
Bones and bonemeal.....		18	18
Borax.....	20	685	705
Bran.....		95	95
Burlap.....	88	115	203
Calcium carbide.....	110		110
Camphor.....		6	6
Canned:			
Fish.....	132	5,474	5,606
Fruit.....	843	18,245	19,090
Meat.....	20		20
Milk.....		25	25
Soup.....	1,790		1,790
Vegetables.....	475	3,188	3,663
Miscellaneous and unclassified.....	2,400	9,890	12,290
Carbon black.....	32	30	62
Celite filterel.....		800	800
Cement.....	210		210
Charcoal.....	145	45	190
Chemicals.....	1,454	640	2,094
China and fire clay.....	45	50	95
Coal.....	4,428	4	4,432
Cocoa.....	116	89	205
Coconuts.....	19	267	286
Coffee.....	306	108	414
Coke.....	1,188		1,188
Cold storage:			
Butter.....		20	20
Eggs.....	11		11
Fish.....	74	73	147
Meat.....		25	25
Other.....	451		451
Confectionery.....	495		495
Copra.....		25	25
Cork.....	22		22
Cotton.....	168	3,179	3,347
Cottonseed meal.....		200	200
Cyanide.....	40	91	131
Drugs and medicines.....	1,294	237	1,581
Dyewoods.....		50	50
Earthenware.....	78	16	94
Eggs, dried.....		12	12
Explosives.....	96	107	203
Fertilizer.....	515	234	749
Flour.....	188	4,651	4,839
Fruit:			
Dried.....		10,005	10,005
Fresh.....		464	464
Fullers earth.....	73		73
Furniture.....	287	14	301
General.....	24,777	19,571	44,348
Glass and glassware.....	1,739	828	2,567
Glue.....		93	93
Guano.....		40	40
Gum.....		46	46

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hair.....	15	49	64
Hardwoods.....	1,180	66	1,246
Hay.....		632	632
Hemp.....	8	463	471
Honey.....		10	10
Hops.....		204	204
Infusorial earth.....		131	131
Jute.....	14	328	342
Kapok.....		35	35
Lard substitute.....	1,425		1,425
Leather.....	50		50
Linoleum.....	543	75	618
Liquors.....	15		15
Lumber.....	897	188,609	189,506
Malt.....	84		84
Manufactured goods:			
Iron and steel.....	60,492	587	61,079
Machinery.....	2,116	433	2,549
Railroad material.....	404		404
Tinplate.....	5,950		5,950
Textiles.....	2,746	59	2,805
Miscellaneous.....	6,551	1,898	8,449
Marble.....	22		22
Matches.....	246	100	346
Metals:			
Antimony.....		203	203
Copper.....		5,504	5,504
Iron.....	709		709
Lead.....		357	357
Scrap.....	335	134	469
Tin.....	140	100	240
Zinc.....	57	1,401	1,458
Other.....	67		67
Milk, powdered.....	122	520	642
Molasses.....	74		74
Musical instruments.....	11		11
Nitrates.....	1,347		1,347
Nuts.....	22	268	290
Oats.....	300		300
Oils:			
Coconut.....		850	850
Cottonseed.....	215		215
Crude.....	8,306		8,306
Gas oil, fuel oil.....		43,877	43,877
Gasoline, benzine, naphtha.....	83	166,429	166,512
Lubricating and greases.....	6,125	13	6,138
Vegetable.....	62	5	67
Wood.....	25	40	65
Other.....	37	808	845
Ores:			
Magnesite.....		23	23
Manganese.....	30		30
Paint.....	617	104	721
Paper.....	4,897	4,094	8,991
Paper pulp.....	31	6,887	6,918
Paper roofing.....	59		59
Peanuts.....	444	393	837
Phosphates.....	1,244		1,244
Porcelain.....	192	453	645
Quicksilver.....		7	7
Rags.....		113	113
Rice.....	154	70	224
Rope.....	318	110	428
Rosin.....	730		730
Rubber:			
Manufactured.....	459	131	590
Raw.....	222	3	225
Scrap.....		65	65
Salt.....	175		175
Sand.....	550		550
Seeds:			
Grass.....		79	79
Other.....	40	355	395
Shells.....	891		891
Silk.....		921	921
Skins and hides.....	20	2,137	2,157
Slate.....	283		283
Soap.....	1,227	3	1,230
Soda.....	472		472
Soda ash.....	511		511
Soda, bicarbonate.....	101		101
Soda, caustic.....	139		139
Starch.....	69		69
Sugar.....	43	2,793	2,836
Sulphur.....	15,316		15,316

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Syrup.....	63		63
Talc.....		56	56
Tallow.....		491	491
Tar.....	65		65
Tea.....	1	115	116
Tobacco.....	1,153	33	1,186
Toys.....	28		28
Vegetables.....		552	552
Waste.....	18	116	134
Wax.....	195	11	206
Wine.....		298	298
Wool.....	10	1,216	1,226
Zinc oxide.....	70		70
Total, January, 1931.....	178,997	526,987	705,984
Total, January, 1930.....	196,628	693,838	890,466
Total, January, 1929.....	257,198	644,018	901,216

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending February 14, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Saramacca.....	United Fruit Co.....	February 7...	February 8...		40
Esparta.....	United Fruit Co.....	February 9...	February 10...	109	
Ecuador.....	Panama Mail S. S. Co.....	February 10...	February 11...	104	5
Knute Nelson.....	Fred Olsen & Co.....	February 10...	February 12...	1,834	2
Shabonee.....	Standard Oil Co.....	February 10...	February 12...	6,285	
Annie Johnson.....	Johnson Line.....	February 11...	February 11...	219	
Guatemala.....	Panama Mail S. S. Co.....	February 11...	February 12...	56	1
Rakuyo Maru.....	Nippon Yusen Kaisha.....	February 12...	February 12...	86	
Salvador.....	Pacific Steam Navigation Co.....	February 12...	February 12...	1	
City of Panama.....	Panama Mail S. S. Co.....	February 12...	February 14...		158
Santa Teresa.....	Grace Line.....	February 14...	February 14...	142	

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 11 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

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OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., February 25, 1931. No. 30.

Comparison of Canal Traffic in January, 1931, with January Traffic in Previous Years.

Commercial traffic through the Canal during the month of January, 1931, was the lowest January traffic since 1927, when 443 such vessels passed through the waterway. In comparison with January, 1930, the traffic for the past month declined 55 transits (10.4 per cent); 220,757 net tons, Panama Canal measurement (8.5 per cent); and 504,695 cargo tons (19.3 per cent). In comparison with January, 1929 (which was the largest month's traffic to date in Canal traffic), there was a decrease of 127 transits (21.1 per cent); 390,409 net tons, Panama Canal measurement (14.1 per cent); and 751,898 cargo tons (26.3 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of January each year from 1915 to 1931, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30 following:

Calendar year.	Month of January.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	96	337,249	426,482	1915.....	102	361,197	465,567
1916.....	2	600	1,008	1916.....	63	199,687	257,843
1917.....	170	539,613	640,177	1917.....	150	483,213	588,213
1918.....	153	495,127	553,507	1918.....	172	547,839	627,669
1919.....	170	499,815	530,816	1919.....	169	510,416	576,385
1920.....	238	765,533	894,628	1920.....	206	712,170	781,208
1921.....	279	1,094,323	1,177,053	1921.....	241	951,323	966,601
1922.....	210	846,516	807,298	1922.....	228	951,455	907,075
1923.....	352	1,610,692	1,591,932	1923.....	331	1,550,482	1,630,656
1924.....	476	2,400,040	2,427,332	1924.....	436	2,179,073	2,249,559
1925.....	401	1,960,015	1,907,469	1925.....	389	1,904,596	1,996,570
1926.....	479	2,300,187	2,346,643	1926.....	433	2,064,549	2,169,787
1927.....	443	2,121,631	2,241,765	1927.....	456	2,185,651	2,312,351
1928.....	540	2,422,770	2,372,061	1928.....	538	2,454,886	2,469,226
1929.....	603	2,771,280	2,858,835	1929.....	534	2,468,483	2,555,250
1930.....	531	2,601,628	2,611,632	1930.....	515	2,498,385	2,502,519
1931.....	476	2,380,871	2,106,937	1931.....	483	2,415,577	2,220,218

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 7 months of fiscal year.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 21, 1931.

No. 848.

Nicaragua, west coast, Corinto Harbor, light buoys moved. The following is quoted from Notice to Mariners No. 6, Washington, D. C., dated February 7, 1931:

The commanding officer of the U. S. S. *Sacramento* reports, under date of January 28, 1931, that the following changes have been made in the buoyage of Corinto Harbor:

(a) Light buoy No. 2 has been moved and reestablished 500 yards 320 degrees from Cardon Head Light.

(b) Light buoy No. 7 has been moved and reestablished 760 yards 117½ degrees from Cardon Head Light.

Approximate position of Cardon Head Light, latitude 12° 27' 54" N., longitude 87° 12' 30" W.

H. BURGESS,
Governor.

CANAL WORK IN JANUARY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of January, 1931.

BALBOA HEIGHTS, C. Z., February 17, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of January, 1931:

NUMBER OF TRANSITS.

During the month, 476 commercial vessels and 3 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 69 vessels belonging to the United States Government, and 2 transits of a vessel solely for repairs, on which no tolls were collected, making a total of 550 transits for the month, or a daily average of 17.74.

Tolls on the commercial vessels amounted to \$2,108,140.42, and on the launches to \$16.77, a total of \$2,108,157.19, or a daily average on all traffic of \$68,005.07.

In comparison with the previous month, traffic for January declined 3.8 per cent in the number of transits, and 3.9 per cent in tolls collected. As compared with January, 1930, traffic for the past month decreased 10.4 per cent in number of transits and 10.7 per cent in tolls. In comparison with the first 7 months of the fiscal year 1930, the corresponding period this year shows a decrease of 355 transits and \$1,182,935.87 in tolls, 9.5 per cent and 7.3 per cent, respectively.

The quadrennial overhaul of the Gatun Locks was commenced on January 7th, and will require 90 to 100 days to complete. One side of the locks is to be overhauled at a time, leaving the other to take care of Canal traffic. During the overhaul the Canal is to be in operation 24 hours daily for the purpose of transiting such vessels as can not be accommodated during daylight hours.

The total number of craft of all kinds transiting the Canal during the month of January in the two preceding years and in 1931 are shown in the following tabulation:

	January, 1929.	January, 1930.	January, 1931.
Commercial vessels.....	603	531	476
Launches (under 20 tons).....	7	4	3
Noncommercial vessels:			
United States Government.....	119	52	69
Panamanian Government.....	2	2	.....
For repairs.....	4	7	2
Total.....	735	596	550

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	10	8	18
Pedro Miguel.....	30	19	49
Miraflores.....	29	18	47
Total.....	69	45	114

COMMERCIAL TRAFFIC. ¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of January, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August.....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September.....	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October.....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November.....	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December.....	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January.....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
Total.....	3,733	3,378	17,849,534	16,909,036	18,228,515	15,541,529	16,188,845.40	15,005,903.53

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for January in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	January, 1929.	January, 1930.	January, 1931.	Average per month for calendar year 1930.
Number of vessels.....	603	531	476	490
Panama Canal net tonnage.....	2,771,280	2,601,628	2,380,871	2,438,406
United States net tonnage.....	2,117,812	1,980,313	1,763,817	1,826,376
Registered gross tonnage.....	3,470,934	3,246,931	2,918,780	3,025,071
Registered net tonnage.....	2,122,121	1,981,575	1,771,209	1,839,006
Tolls.....	\$2,502,815.12	\$2,360,211.24	\$2,108,140.42	\$2,178,835.41
Tons of cargo carried.....	2,858,835	2,611,632	2,106,937	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	January, 1929.	January, 1930.	January, 1931.	
Number of transits.....	19.45	17.13	15.35	16.12
Panama Canal net tonnage.....	89,396	83,923	76,802	80,167
Tolls.....	\$80,735.97	\$76,135.84	\$68,004.53	\$71,632.95
Tons of cargo carried.....	92,220	84,246	67,966	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of January in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	January, 1929.	January, 1930.	January, 1931.
Panama Canal net tonnage.....	4,596	4,899	5,002
United States net tonnage.....	3,512	3,729	3,705
Registered gross tonnage.....	5,756	6,115	6,132
Registered net tonnage.....	3,519	3,732	3,721
Tolls.....	\$4,150.61	\$4,444.84	\$4,428.87
Tons of cargo (including vessels in ballast).....	4,741	4,918	4,426
Tons of cargo (laden vessels only).....	5,834	5,791	5,307

NATIONALITY OF VESSELS.

Nineteen nationalities were represented in the commercial traffic through the Canal in January, 1931. Vessels of United States registry, with 197, led in the number of transits, while those flying the British flag, with 134, were second. Vessels of these two nationalities made up 69.5 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 32 and 30 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of January, 1931, was 2,106,937 tons. Cargo from the Atlantic to the Pacific aggregated 562,832 tons, compared with 551,712 tons in December, 1930, and 733,572 tons in January, 1930. From the Pacific to the Atlantic there were 1,544,105 tons, as compared with 1,615,172 tons in December, 1930, and 1,878,060 tons in January, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 164,308 tons, constituted the heaviest item of cargo, followed by mineral oils with 67,621 tons, cotton with 41,087 tons, sulphur with 27,779 tons, and slag with 24,701 tons. There was a decrease of 170,740 tons, or 23.3 per cent, in cargo moving in this direction as compared with January, 1930, owing to a general decline in shipments of the majority of the leading commodities normally routed in this direction.

From the Pacific to the Atlantic, mineral oils, as in previous months, constituted the leading commodity, totaling in January, 1931, 433,448 tons. This was followed by lumber, with 263,178 tons, nitrates with 159,468 tons, ores with 107,920 tons, and wheat with 93,620 tons. All these items declined in comparison with January, 1930, as follows: Mineral oils, 163,248 tons, or 27.4 per cent; lumber, 32,881 tons, or 11.1 per cent; nitrates, 14,942 tons, or 8.6 per cent; ores, 67,520 tons, or 38.5 per cent; and wheat, 48,214 tons, or 34.0 per cent. In aggregate, there was a decrease of 333,955 tons, or 17.8 per cent, in cargo moving in this direction.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.917 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.717 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of January, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$9,089.18	\$8,256.40		\$832.78
British.....	624,381.34	658,715.00	\$34,333.66	
Chilean.....	17,445.00	19,366.00	1,921.00	
Colombian.....	1,533.40	1,301.00		232.40
Danish.....	29,760.67	33,700.60	3,939.93	
Danzig.....	25,898.43	23,110.40		2,788.03
Dutch.....	38,443.75	48,359.00	9,915.25	
French.....	63,877.29	67,254.20	3,376.91	
German.....	102,300.28	113,214.40	10,914.12	
Greek.....	3,400.00	4,292.00	892.00	
Italian.....	37,753.75	42,072.00	4,318.25	
Japanese.....	80,996.25	77,657.00		3,339.25
Norwegian.....	109,432.85	124,436.20	15,003.35	
Panamanian.....	4,323.15	6,077.00	1,753.85	
Peruvian.....	4,312.80	3,544.00		768.80
Spanish.....	2,585.00	3,052.00	467.00	
Swedish.....	30,368.26	30,220.80		147.46
United States.....	917,576.52	960,346.20	42,769.68	
Yugoslav.....	4,662.50	4,700.00	37.50	
Total.....	2,108,140.42	2,229,674.20	129,642.50	8,108.72
Net increase for all traffic.....			121,533.78	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$30,601.01
United States foreign trade.....	14,134.82
United States—Canal Zone trade.....	* 1,966.15
Total.....	42,769.68

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in January, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included.

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.80	1.80
British.....	.62	1.24	.98
Chilean.....	.37	1.01	1.07
Colombian.....	.97	1.24	1.69
Danish.....	.47	1.52	1.35
Danzig.....		1.83	1.83
Dutch.....	.45	1.13	.75
French.....	.41	1.38	.91
German.....	.68	1.36	1.05

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Greek.....		1.96	1.96
Italian.....	.21	.78	.60
Japanese.....	.74	1.07	.90
Norwegian.....	1.12	1.53	1.39
Panamanian.....	.80		.80
Peruvian.....	.92		.92
Spanish.....		1.91	1.91
Swedish.....	.61	2.80	2.01
United States.....	.66	1.40	1.07
Yugoslav.....		1.99	1.99
Averages, January, 1931.....	.65	1.35	1.05
Averages, January, 1930.....	.79	1.44	1.17
Averages, January, 1929.....	.88	1.52	1.27

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of January is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	6	34,324	\$35,485.15	44	237,568	\$247,121.60
Ballast.....	26	144,534	104,064.48	2	6,643	4,782.96
General cargo ships:						
Laden.....	163	828,400	738,905.05	184	902,587	815,662.80
Ballast.....	47	221,506	158,320.72	1	4,676	3,331.25
Noncargo-carrying ships:						
Yachts.....	2	75	64.65	1	558	401.76
Total.....	244	1,228,839	1,036,840.05	232	1,152,032	1,071,300.37
Method of propulsion:						
Steam.....	173	841,408	732,624.81	172	840,314	794,118.41
Motor.....	71	387,431	304,215.24	60	311,718	277,181.96
Total.....	244	1,228,839	1,036,840.05	232	1,152,032	1,071,300.37

Of the 345 steam-driven vessels, 231 were oil burning, 110 coal burning, and 4 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of January, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated.

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships.....				1	3,434	\$4,292.50
Cruisers.....	2	18,900	\$9,450.00	1	8,900	4,450.00
Gunboats.....	2	3,150	1,575.00			
Mine sweepers.....	2	1,900	950.00	3	2,850	1,425.00
Patrol boats.....	2	1,000	500.00			
Submarines.....	10	8,628	4,314.00	26	16,636	8,318.00
Submarine tenders.....	1	1,496	1,122.00	1	2,360	2,950.00
Tankers.....	1	6,258	7,822.50			
Transports.....				1	3,992	4,990.00
Tugs.....	3	3,000	1,500.00	3	3,000	1,500.00
U. S. Army vessels:						
Mine planters.....	1	1,208	604.00			
Transports.....	3	11,724	14,655.00	4	15,159	18,948.75
Tugs.....	1	46	34.50	1	46	34.50
Total, U. S. Government.....	28		42,527.00	41		46,908.75
Vessels for repairs:						
Tankers.....	1	1,637	1,227.75	1	1,637	1,227.75
Grand total.....	29		43,754.75	42		48,136.50

* Indicates displacement tonnage.

* Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of January, 1931, carried cargo as follows: Atlantic to Pacific, 915 tons; Pacific to Atlantic, 3,940 tons; total, 4,855 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of January, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific	3	20	\$16.77
Pacific to Atlantic			
Total	3	20	16.77

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of January, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	84,961	63,972	148,933
Local cargo shipped..... tons..	5,649	942	6,591
Transit cargo arriving..... tons..	2,099,336	2,072,488	4,171,824
Transit cargo clearing..... tons..	2,098,960	2,087,583	4,186,543
Cargo received for transshipment..... tons..	27,852	3,527	31,379
Cargo transhipped..... tons..	27,120	3,090	30,210
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	98	38	136
Number of releases issued.....	789	272	1,061
Tons received.....	1,066	370	1,436
Tons withdrawn.....	1,171	384	1,555
Packages received.....	4,354	2,756	7,110
Packages withdrawn.....	6,160	3,996	10,156
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	53	3	56
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	18,457	26	18,483
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	85	7	92
Panama Railroad Company..... tons..	8		8
U. S. Army, including vessels..... tons..	597	1	598
Individuals and companies..... tons..	95		95
Transferred to Navy..... tons..	34		34
Total sales and issues..... tons..	19,276	34	19,310
Coal on hand, January 1, 1931..... tons..	39,326		39,326
Coal on hand, February 1, 1931..... tons..	30,045		30,045
Coal received during month..... tons..	9,995		9,995
Coal received from Navy..... tons..		34	34
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	8,968.77	15,275.84	24,244.61
Panama Railroad Company..... bbls..	1,211.24	474.74	1,685.98
U. S. Army and Navy..... bbls..		125.60	125.60
Individuals and companies..... bbls..		406.26	406.26
Total sales and issues..... bbls..	10,180.01	16,282.44	26,462.45
Fuel oil received during January, 1931..... bbls..		67,876.07	67,876.07
Fuel oil on hand, February 1, 1931..... bbls..	18,814.89	80,746.29	99,561.18
Diesel oil borrowed from Union Oil Co..... bbls..	184.02		184.02
Diesel oil issued and sold during January, 1931..... bbls..	184.02	2,543.82	2,727.84
Diesel oil on hand, February 1, 1931..... bbls..	1,083.28	39,331.50	40,414.78
Miscellaneous transfers..... bbls..	441.75	419.73	861.48
Gasoline and kerosene pumped for The Panama Canal..... bbls..	10,321.78	27,470.41	37,792.19
Gasoline pumped for individuals and companies..... bbls..	656.36	24,780.74	25,437.10
Oil pumped for individuals and companies:			
Receipts..... bbls..	341,403.08	234,836.53	576,239.61
Issues..... bbls..	268,618.70	157,820.55	426,439.25
Oil pumped for U. S. Navy..... bbls..	3,815.77	9,246.10	13,061.87
Total fuel oil, gasoline, and kerosene handled..... bbls..	635,621.47	541,276.39	1,176,897.86

	Cristobal.	Balboa.	Total.
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	14	2	16
Measured for Panama Canal net tonnage.....	3		3
Remeasured for Panama Canal net tonnage.....	14	4	18
Panama Canal net tonnage corrected.....	3	2	5
U. S. equivalent tonnage corrected.....	12	11	23
Services of harbor equipment:			
Tugs, total operating hours.....	410½	216	626½
Launches, total operating hours.....	1,411	1,537	2,948
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$13,711.23	\$7,382.50	\$21,093.75
Pilotage.....	19,612.00	7,814.00	27,426.00
Seamen.....	11,324.00	10,928.00	22,252.00
Launch service.....	2,004.50	2,492.00	4,496.50
Wharfage.....	16,303.57	6,775.48	23,079.05
Ships measured.....	100.00		100.00
Miscellaneous.....	514.81	126.50	641.31
Ships repaired at Panama Canal shops:			
Commercial.....	44	13	57
U. S. Army and Navy.....	7	10	17
Panama Canal equipment.....	6	14	20
Total.....	57	37	94
Vessels dry-docked:			
Commercial.....	6	11	17
U. S. Army and Navy.....	1	2	3
Panama Canal equipment.....	1	3	4
Total.....	8	16	24
Clearances issued.....	294	250	544
Bills of health issued.....	311	252	563

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	569	3,507,376	2,134,094	535	3,085,654	1,886,085
Vessels entering port but not transiting Canal..	73	474,524	279,723	12	38,634	26,816
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	125	762,559	454,553	111	707,921	423,075
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	569	3,486,424	2,112,970	531	3,087,980	1,883,710
Vessels clearing port but not transiting Canal..	77	488,912	288,123	12	42,403	29,159
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	128	772,367	460,627	112	706,328	422,002

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,129	762	1,891	132	415	547
From Pacific ports.....	176	114	290	190	178	368
Total disembarking.....	1,305	876	2,181	322	593	915
Embarking:						
For Atlantic ports.....	879	553	1,432	69	435	504
For Pacific ports.....	154	138	292	341	162	503
Total embarking.....	1,033	691	1,724	410	597	1,007
Remaining on board:						
From Atlantic to Pacific ports.....	1,609	2,069	3,678	1,704	1,768	3,472
From Pacific to Atlantic ports.....	923	1,347	2,270	1,109	1,456	2,565
From Atlantic to Atlantic ports.....	2,503	101	2,604			
From Pacific to Pacific ports.....				5	89	94
Total remaining on board.....	5,035	3,517	8,552	2,818	3,313	6,131
Total arriving.....	6,340	4,393	10,733	3,140	3,906	7,046
Total departing.....	6,068	4,208	10,276	3,228	3,910	7,138

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Percent of total transits.
Atlantic to Pacific.....	244	58	23.8
Pacific to Atlantic.....	232	60	25.9
Total.....	476	118	24.8

In addition to the aforesaid, 59 passenger-carrying vessels called at the port of Cristobal and 1 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of January, 1931, 43 commercial airplanes entered and 42 cleared at the port of Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of January, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,723.29	\$8,167.02	\$16,320.47	\$121.76	\$4,341.78	\$30,674.32
Government vessels.....	181.50	1,338.01	11,496.61	31.32	1,496.46	14,543.90
P. R. R. vessels.....	6.00	276.73	188.10	1,046.30	44.83	1,561.96
Total sales, January, 1931....	1,910.79	9,781.76	28,005.18	1,199.38	5,883.07	46,780.18
Total sales, January, 1930....	1,951.67	15,015.01	38,500.57	1,189.03	7,607.51	64,263.79
Total sales, January, 1929....	3,345.72	16,521.80	57,792.25	1,238.52	10,169.47	89,067.76
Sales at Balboa to:						
Commercial vessels.....	660.58	3,233.99	14,279.26	332.01	7,788.16	26,294.00
Government vessels.....	301.75	1,414.43	8,733.17	595.41	1,240.80	12,285.56
P. R. R. vessels.....	2.25	82.50	21.28	.....	12.65	118.68
Total sales, January, 1931....	964.58	4,730.92	23,033.61	927.42	9,041.61	38,698.24
Total sales, January, 1930....	1,439.83	13,216.09	32,956.06	658.74	5,623.58	53,894.30
Total sales, January, 1929....	4,764.16	17,536.75	50,982.39	590.75	20,233.75	94,107.80

The aggregate sales to Government vessels during the month was \$26,829.46; to Panama Railroad vessels, \$1,680.64; and to other commercial vessels, \$56,968.32, making the total sales to all vessels, \$85,478.42. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of January, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			Jan., 1929.	Jan., 1930.	Jan., 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	223	223	446	20	13	33	610	534	479
Pedro Miguel.....	227	233	460	24	20	44	614	558	504
Miraflores.....	227	232	459	25	17	42	563	551	501
Number of vessels put through locks.									
Gatun.....	234	244	478	56	42	98	760	614	576
Pedro Miguel.....	233	244	477	80	60	140	815	641	617
Miraflores.....	233	244	477	78	59	137	805	642	614

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	75	88	87
Panama Canal equipment.....	18	49	47
Launches (under 20 tons).....	3	2	2
Vessels for repairs.....	2	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in January, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,868,160,000	1,098,770,000	1,158,420,000
Maintenance.....	28,570,000		
Leakage.....	40,000,000	20,000,000	20,000,000
Total, January, 1931.....	1,936,730,000	1,118,770,000	1,178,420,000
Total, December, 1930.....	2,165,030,000	1,696,650,000	1,544,550,000
Total, January, 1930.....	1,416,100,000	1,193,330,000	1,207,650,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of January, 1931, are shown in comparative form in the following tabulation:

	January.		January—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	1,080	920	5,050	682	1,906
Maximum momentary discharge for the month.....	1,888	1,363	50,200		
Gatun Lake watershed, total yield.....	1,854	1,455	9,298	1,455	2,948
Gatun Lake watershed, net yield.....	1,106	616	8,641	616	2,138
Draft on Gatun Lake for lockages and power.....	1,993	2,348	3,275	987	2,166

¹ January 29, 1909.

² 1914 not included.

The monthly mean discharge of the Chagres River at Alhajuela for January, 1931, was 920 c. f. s., which is 52 per cent below the 30-year average of 1,906 c. f. s. The maximum monthly mean discharge on record of January is 5,050 c. f. s. in 1910, and the minimum is 682 c. f. s. in 1906. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 1,363 c. f. s. at elevation 92.64 feet on the 3d, and the minimum was 666 c. f. s. at elevation 91.97 feet on the 29th and 30th. The maximum momentary discharge on record for January is 50,200 c. f. s. at elevation 106.55 feet on January 29, 1909, and the minimum is 560 c. f. s. at elevation 91.60 feet on January 31, 1912.

Gatun Lake varied in elevation during January from a maximum of 86.78 feet on the 1st and 2d to a minimum of 85.67 feet on the 31st. The net decrease in the elevation of the lake during the month was 1.05 feet. The total yield of Gatun Lake watershed was 1,455 c. f. s., which is 51 per cent below the 18-year January average and is the minimum yield for the period of record. The maximum total yield for January is 9,298 c. f. s. in 1922. The net yield (total yield minus evaporation) amounted to 616 c. f. s., or 1,649 million cubic feet, which is equivalent to 0.36 foot on Gatun Lake. This is the lowest net yield for January on record.

Miraflores Lake varied between elevations 54.10 feet on the 16th to 53.20 feet on the 9th, 10th, 30th, and 31st. The mean elevation for the month was 53.63 feet and at midnight on the 31st it was 53.34 feet.

SEISMOLOGY.

Nine seismic disturbances were recorded during the month—on the 2d, 11th, 14th, 16th, 17th, and 28th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 4,485,900 kilowatt hours, and the computed water consumption was 3,294,817,734 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 1,399,100 kilowatt hours,

and the fuel oil consumption was 2,719.55 barrels. Dry season water conservation was started on January 10th, since which date one engine load of approximately 2,600 kilowatts has been carried at this station, with a water conservation of approximately 500 c. f. s.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 47 vessels during the month. There were 386 work orders issued during the month, as compared with 401 issued during the previous month.

MECHANICAL DIVISION.

During the month of January, 1931, miscellaneous repairs were made on 57 vessels at Cristobal and 37 at Balboa. Eight vessels were dry-docked at Cristobal and 16 at Balboa. Vessels of the Peruvian Navy, including the cruisers *Coronel Bolognesi* and *Almirante Grau*, and 4 submarines, were at Balboa for annual inspection and repairs. The annual overhaul on the United States Navy's submarine *S-17* was completed during January.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 24,900 cubic yards of earth were excavated, and 22 corrugated iron culverts were installed. Headwalls were constructed for 13 culverts. On the Paraiso-Summit road, work was continued on the manufacture of reinforcing mats, preparatory to starting concreting in February. In connection with municipal improvements at the Naval Air Station at Coco Solo, 2,000 feet of temporary track were removed, 750 cubic yards of coral were excavated for permanent track location, ties were placed, and 2,850 feet of permanent track were ballasted.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual maintenance work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 823,576,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month, with an average of five-tenths of a foot toward the Canal, between stations 1770-00 and 1794-00 W., and four-tenths of a foot southward between stations 1774-00 and 1776-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in the Folks River borrow pit, excavating a total of 122,300 cubic yards of sand, coral, and clay. The total material removed from the borrow pit to date is 351,800 cubic yards, of which 250,000 cubic yards remained in place, giving a run-off of 28.9 per cent. The area of completed fill is 11 acres.

The total excavation during January, 1931, was 1,114,971 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 3.....	55,150	13,800	68,950
Canal prism, Gaillard Cut—			
Project No. 3.....	6,450	57,800	64,250
Maintenance.....	3,100	12,300	15,400
Canal prism, Pacific entrance—			
Project No. 1.....		9,550	9,550
Maintenance.....	486,000	1,700	487,700
Balboa inner harbor—			
Project No. 1, extension No. 1.....	23,000	47,750	70,750
Maintenance.....	271,850		271,850
Plant excavation:			
Colon fill.....	122,300		122,300
Dredging sand at Chame.....	4,221		4,221
Total.....	972,071	142,900	1,114,971

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand four hundred and twelve single trips were made, and 566 Panama Canal, 1,145 U. S. Army, and 5,902 other vehicles, a total of 7,613, were ferried across the Canal.

MADDEN DAM PROJECT.

The consulting board, consisting of four members, completed their studies here and returned to the United States on January 3. Their preliminary report recommending a straight concrete gravity dam was submitted to this office before their departure.

The designing engineer, accompanied by three assistants, left at the end of the month for detached duty in Denver, Colo., in connection with the design and specifications of the main dam and power station, and saddle dams. Studies for flood regulation were made with numerous sketches. Studies of a concrete arch bridge over the spillway, spillway gates, and gantry crane for raising spillway gates, were continued. Tables and charts were prepared for final geological report. A series of drawings were in course of preparation to accompany specifications for bids on the project. The change of the southern boundary of the land on the left bank of the Chagres River which has been acquired by the United States was surveyed and monumented. With the abandonment of drill hole N-6, the exploratory drilling program was completed on January 12. To January 31, there has been completed a total of 28,303.6 linear feet of drilling. The field work of the geological investigations was completed in January, and final geological report was in course of preparation.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on January 31, 1931, was 24,047, composed of 8,134 Americans, 2,953 of whom were men, 2,451 women, and 2,730 children; 174 Europeans, 85 of whom were men, 31 women, and 58 children; and 15,739 West Indians, 4,327 of whom were men, 2,823 women, and 8,589 children. The total number of persons in quarters on January 31, 1930, was 22,316.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of January 21, 1931, with a comparison of the working force for the preceding month and for January, 1930:

	Total employees.		As of January 21, 1931.		
	January, 1930.	December, 1930.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	165	117	56	60	116
Electrical.....	397	354	168	250	418
Municipal Engineering.....	771	1,035	102	1,111	1,213
Lock Operation.....	944	1,054	369	1,637	2,006
Dredging.....	1,271	1,182	199	996	1,195
Madden Project.....	774	139	19	230	249
Mechanical.....	1,408	1,419	470	892	1,362
Marine.....	777	761	201	635	836
Fortifications.....	426	309	22	318	340
Total.....	6,933	6,370	1,606	6,129	7,735
Supply Department:					
Quartermaster.....	2,382	1,890	198	1,707	1,905
Commissary.....	1,547	1,574	232	1,321	1,553
Cattle Industry—Plantations.....	117	98	2	115	117
Hotel Tivoli.....	123	115	8	113	121
Hotel Washington.....	115	111	8	102	110
Transportation.....	317	345	79	245	324
Total.....	4,601	4,133	527	3,603	4,130
Accounting Department.....	213	206	197	6	203
Health Department.....	1,165	1,120	283	817	1,100
Executive Department.....	849	886	547	337	884
Total.....	2,227	2,212	1,027	1,160	2,187
Panama Railroad Company:					
Superintendent.....	348	301	47	270	317
Transportation.....	186	187	62	134	196
Receiving and Forwarding Agency.....	1,377	1,372	80	1,661	1,741
Coaling Stations.....	308	226	38	232	270
Total.....	2,219	2,086	227	2,297	2,524
Grand total, January, 1930.....	15,980				
Grand total, December, 1930.....		14,801			
Grand total, January, 1931.....			3,387	13,189	16,576

Additions to the gold force on the Isthmus in January were as follows: Employed in the United States, 15; reemployed in the United States, 7; employed on the Isthmus, 18; reemployed on the Isthmus, 19; total, 59. Separations from the gold force totaled 23, as follows: Resigned, 9; discharged, 8; retired, 3; died, 3. At the end of the month there were on file 750 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 199 deaths occurred during the month of January, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population 143,636), which is equivalent to an annual death rate of 16.63 per 1,000 population. The leading causes of death were: Pneumonia (broncho and lobar), 29; tuberculosis (various organs), 28; nephritis (acute and chronic), 14; syphilis, 10; and organic diseases of the heart, 10. There were 8 deaths from apoplexy, 8 from diarrhea and enteritis, 2 from dysentery, and 1 from whooping cough. There were 23 deaths among nonresidents, which are not included in the above statistics.

There were 320 live births and 22 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 28.57. Deaths among children under 1 year of age numbered 40, giving an infant mortality rate, based on the number of live births reported, of 125.00.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 188, of whom 31 were employees (6 white and 25 colored), 29 were members of employees' families (4 white and 25 colored), 20 were Canal Zone agriculturists, 50 were other civilian nonemployees, and 58 were Army and Navy personnel. Of the 60 employees and members of employees' families, 42 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick. There was 1 death from malaria among residents, a colored Canal Zone agriculturist.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$491,482.30, of which \$467,916.20 was for the Department of Operation and Maintenance, and \$23,566.10 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material amounted to \$46,481.87.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of December, 1930, as compared with December, 1929, with the figures for the first six months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of January at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	December, 1929.	December, 1930.	To the end of December.	
			Last year.	This year.
Tolls.....	\$2,309,074.83	\$2,192,625.70	\$13,828,550.86	\$12,896,890.05
Other receipts.....	439,040.73	391,294.22	2,208,442.32	2,028,300.12
Total transit revenues.....	2,748,115.56	2,583,919.92	16,036,993.18	14,925,190.17
Total transit expenses.....	1,108,341.76	1,175,570.05	6,615,147.09	6,787,946.84
Net transit revenues.....	1,639,773.80	1,408,349.87	9,421,846.09	8,137,243.33
Three per cent capital charge....	623,944.72	626,657.17	3,722,539.33	3,756,337.15
Transit surplus.....	1,015,829.08	781,692.70	5,699,306.76	4,380,906.18
Business revenues.....	1,469,915.18	1,351,189.57	9,489,904.29	9,022,720.42
Business expenses.....	1,386,445.40	1,292,796.56	8,955,039.69	8,603,316.82
Net business revenues.....	83,469.78	58,393.01	534,864.60	419,403.60
Three per cent capital charge.....	63,036.28	64,716.28	399,850.53	415,894.00
Business surplus.....	20,433.50	(6,323.27)	135,014.07	3,509.60
Combined revenues.....	4,218,030.74	3,935,109.49	25,526,897.47	23,947,910.59
Combined expenses.....	2,494,787.16	2,468,366.61	15,570,186.78	15,391,263.66
Net revenues.....	1,723,243.58	1,466,742.88	9,956,710.69	8,556,646.93
Three per cent capital charge.....	686,981.00	691,373.45	4,122,389.86	4,172,231.15
Combined surplus.....	1,036,262.58	775,369.43	5,834,320.83	4,384,415.78

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Cargo Through the Canal During January, 1931.

On pages 440 and 441 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in January, 1931. This cargo, segregated according to direction as compared with January, 1930, and the differences, is shown in the following tabulation:

	January, 1930.	January, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	733,572	562,832	-170,740
Pacific to Atlantic.....	1,878,060	1,544,105	-333,955
Total	2,611,632	2,106,937	-504,695

It will be noted from the above that the Atlantic to Pacific tonnage decreased 170,740 tons (23.3 per cent) as compared with January, 1930, and that from the Pacific to Atlantic decreased 333,955 tons (17.8 per cent), making a total decrease in cargo tonnage in both directions of 504,695 tons (19.3 per cent). As has been pointed out in the past several months the decline in the Pacific-bound tonnage has been occasioned by a general curtailment in the shipments of the majority of the leading commodities normally routed in this direction. For several months prior to January, 1931, the slump in the cargo tonnage movement from the Pacific to the Atlantic has been relatively much lower than that in the opposite direction owing, principally, to the heavy movement of several food products from the Pacific Northwest. While these items as a whole held their own, with the exception of wheat and canned goods, the heavy curtailment in the shipments of other important commodities, particularly mineral oils, was sufficient to account for the decline shown above.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-five and nine-tenths (65.9) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 26.3 per cent in Europe. Tonnage from the United States decreased 96,836 tons (20.7 per cent) in comparison with January, 1930, while that from Europe declined 48,665 tons (24.7 per cent). In relation to the total cargo the amount coming from the United States in January, 1931, was slightly higher than in January, 1930, while that from Europe was slightly lower.

Destination.—Thirty-nine and six-tenths (39.6) per cent of the Pacific-bound cargo tonnage was destined to the United States; 22.2 per cent to Asia; 14.6 per cent to Australasia; and 13.8 per cent to South America. Tonnage to all these areas decreased as follows in comparison with January, 1930: To the United States, 42,127 tons (15.9 per cent); to Asia, 74,735 tons (37.4 per cent); to Australasia, 29,217 tons (26.3 per cent); and to South America, 24,052 tons (23.7 per cent). In relation to the total cargo the tonnage destined to the United States was higher last month than in January, 1930, while that going to Asia and Australasia was lower. The proportionate amount destined for South America was approximately the same as in January, 1930.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 53.2 per cent came from the United States; 24.9 per cent from South America; 9.5 per cent from Canada; 6.1 per cent from Australasia; and 5.2 per cent from

Asia. The amounts coming from Australasia and Asia showed relative as well as actual increases of 19,737 tons (26.3 per cent) and 4,551 tons (6.0 per cent), respectively, as compared with January, 1930. Cargo tonnage from the United States declined 247,010 (23.1 per cent) in comparison with January, 1930, also showing a decline in its proportion to the total cargo. Cargo from Canada also showed a decrease in comparison with January, 1930, in the amount of 57,703 tons (28.3 per cent), as did that from South America which registered a decline of 57,460 tons (13.0 per cent). Canada also contributed a smaller proportion of the total cargo in January, 1931, than in January, 1930, while that from South America was a little higher than in January, 1930.

Destination.—Segregated according to destination, 50.9 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 42.6 per cent to Europe. Tonnage to the United States decreased 320,104 tons (28.9 per cent), in comparison with January, 1930, also showing a decline in its relation to the total cargo in this direction. Although showing a considerable increase in its relation to the total cargo over January, 1930, there was a decline of 32,050 tons (4.6 per cent) in cargo tonnage destined to Europe. The heavy decline in mineral oil shipments was a large contributing factor in the heavy decrease in tonnage destined to the United States.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify over 88 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 12 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for January, 1930, or January, 1931, are listed in the following tabulation, showing differences:

Commodity.	January, 1930.	January, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	15,966	8,212	-7,754
Asphalt.....	17,485	3,892	-13,593
Automobiles.....	12,049	8,034	-4,015
Cement.....	36,608	12,007	-24,601
Coal and coke.....	10,774	10,619	-155
Cotton.....	31,902	41,087	+9,185
Manufactured goods:			
Iron and steel.....	158,083	113,777	-44,306
Machinery.....	12,793	14,044	+1,251
Railroad material.....	10,530	5,255	-5,275
Tinplate.....	22,361	14,537	-7,824
Textiles.....	10,809	6,276	-4,533
Miscellaneous.....	10,303	10,419	+116
Metal scrap.....	21,971	1,886	-20,085
Oils, mineral.....	47,620	67,621	+20,001
Paper.....	24,145	16,419	-7,726
Phosphates.....	68,621	12,910	-55,711
Slag.....	2,470	24,701	+22,231
Sulphur.....	16,501	27,779	+11,278
Tobacco.....	11,530	8,368	-3,162

The above 19 commodity groups for January, 1931, comprise 72.8 per cent of the cargo moving from the Atlantic to the Pacific. Six of the items showed increases, and 13 decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 98 per cent of the cargo moving from the Pacific to the Atlantic

during the month of January, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	January, 1930.	January, 1931.	Difference.
	<i>Longtons.</i>	<i>Longtons.</i>	<i>Longtons.</i>
Barley.....	8,554	14,924	+6,370
Beans.....	16,630	28,874	+12,244
Canned goods (fish, fruit, vegetables, etc.).....	80,014	57,841	-22,173
Coffee.....	13,623	16,511	+2,888
Copra.....	12,676	18,333	+5,657
Cold storage (food products) ¹	32,691	46,690	+13,999
Cotton.....	13,415	5,502	-7,913
Fruit, dried.....	14,907	31,553	+16,646
Fruit, fresh.....	17,123	32,470	+15,347
Lumber.....	296,059	263,178	-32,881
Metals, various.....	49,106	42,369	-6,737
Nitrates.....	174,410	159,468	-14,942
Oils, mineral.....	596,696	433,448	-163,248
Ores (principally iron).....	175,440	107,920	-67,520
Paper pulp.....	13,302	7,753	-5,549
Sugar.....	48,302	62,571	+14,269
Wheat.....	141,834	93,620	-48,214
Wool.....	16,092	13,950	-2,142

¹ Does not include fresh fruit.

The above 18 commodity groups for January, 1931, comprise 93 per cent of the cargo moving from the Pacific to the Atlantic. Eight of the items increased in comparison with January, 1930, and 10 decreased.

(Continued on next page.)

British Battleship "Nelson" at Balboa.

The battleship *Nelson*, of the Royal British Navy, in command of Admiral Sir Michael Hodges, arrived at Cristobal on the morning of February 23, 1931, and immediately transited the Canal to Balboa, to pay a formal call of about a week's duration to the United States Fleet now sojourning at Balboa following maneuvers in and beyond the Gulf of Panama. The *Nelson*, which is one of the latest and most modern units of the British Navy, is 702 feet long (overall), 106 feet beam, and of 36,640 tons displacement. With her sister ship *Rodney*, the *Nelson* is said to be second in size only to the *Hood*, which is of 44,799 tons displacement. The *Hood* has made one transit of the Canal—in 1924.

Tolls on the *Nelson* for the one way amounted to \$18,320 at the tariff rate of 50 cents per displacement ton for war vessels of this type, and with the exception of those on the *Hood*, are the greatest yet levied on a ship for transiting the Canal; charges on the *Hood* were \$22,399.50.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, January, 1931.—Continued from page 439.
(Figures represent tons of 2,240 pounds.)

FROM—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.			ASIA.					Grand total.	Per cent of total cargo.			
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. ¹	Total, Asia.
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports.....	121,345	9	606	189 8	207 130	356 15,527	1,188	459	5,637	5,946	28,757	4,999	3,696	8,695	10,567	10,334	22,422	18,729	62,052	229,860	40 8		
South Atlantic ports.....	2,434					2,434															1,245	3,688	0 7
Gulf ports.....	55,218	980		10 019	539	66,756	592				592	9,838	215	10,053	63 13	656	28,881	17,302	59,902	137,303	24 4		
Total, United States.....	178,997	989	606	10,208	746	199,546	16,128	1,188	459	5,637	5,946	29,358	14,837	9,411	18,748	10,630	24,170	51,338	37,061	123,199	370,851	65 9	
East coast of Canada.....	2,500	1,117				3,617							967	2,930	3,897				1,335	1,335	8,849	1 6	
East coast of Central America.....	2,099		4,839			6,938	1,855	1,107	1,215	386	761	5,324		2,655	2,655						12,362	2 2	
Cristobal, C. Z. ²				13,362		13,371	26					28									12,399	2 4	
West Indies.....		9																					
Total, North America.....	183,596	2,115	5,445	23,570	8,746	223,472	18,009	2,297	1,674	6,023	6,707	34,710	15,804	9,496	25,300	10,630	24,170	52,673	37,061	124,534	408,016	72 6	
EUROPE:																							
British Isles.....	1,870	3,034				4,904	4,824	280	646	1,247	326	7,323		33,405	767	34,172					46,399	8 2	
Belgium.....	10,496	3,252	538			14,293	3,881	274	217	1,942	897	7,211		18,777	52	18,829					40,333	7 2	
France.....	403	366	1,345	2		2,116	225	10	29	158	9	431			531	531					3,078	0 5	
Germany.....	9,675	42	736			10,453	2,915	238		1,306	130	4,594									15,047	2 7	
Holland.....	2,716	142				2,851	113	114		206	1,041	1,474									4,425	0 8	
Italy.....	496	12	589			1,097															1,097	0 2	
Norway and Sweden.....	3,470	40	1,735	1,941		7,186						5									7,186	1 3	
Spain and Portugal.....	122	13	25	16		176															181		
Europe. ¹	4,324	17	1,416	120		5,877	6,142	200	508	1,818	13,107	21,775			3,013	3,013					30,665	5 4	
Total, Europe.....	33,572	6,918	6,384	2,179		49,053	18,100	1,121	1,405	6,677	15,510	42,813			52,182	4,363	56,545				148,411	26 3	
East coast of South America.....	5,607	12	18			5,637	85					85								683	6,405	1 1	
Grand total.....	222,775	9,045	11,847	25,749	8,746	278,162	36,194	3,418	3,079	12,700	22,217	77,608	15,804	61,678	4,363	81,845	10,630	24,170	53,356	37,061	125,217	562,832	100 0
Per cent of total cargo:																							
January, 1931.....	39 6	1 6	2 1	4 6	1 5	49 4	6 4	0 6	0 5	2 3	4 0	13 8	2 8	11 0	0 8	14 6	1 9	4 3	9 4	6 6	22 2	100 0	
January, 1930.....	36 2	3 9	1 9	0 4	1 4	43 8	6 5	0 6	0 3	2 0	4 5	13 9	5 8	9 3		15 1	1 1	3 6	17 0	5 5	27 2	100 0	
January, 1929.....	43 9	2 9	4 0	0 2	2 1	53 1	3 7	1 5	0 3	2 0	5 0	11 9	5 2	8 0		13 2	0 9	4 9	12 0	4 0	21 8	100 0	

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, January, 1931.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.			
	UNITED STATES.					WEST INDIES.					EUROPE.														
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe.*	Total, Europe.			East coast of South America.	Egypt.	Africa.
NORTH AMERICA:																									
W. coast United States	456,044	12,656	58,237	526,937	796	8,853	22	257	538,893	92,054	11,221	1,794	16,658	34,466	3,332	5,444	3,046	164	88,313	256,492	5,581	419	821,385	53.2	
W. coast of Canada	15,522		101	15,623	5,934	150	230	3,032	24,969	72,182	105	4,429	1,110	2,395	1,992	4,173			33,720	120,106	1,153	32	146,260	9.5	
W. coast Cen. America	872			872			8,148	44	9,064	180			72	979	60				1,056	2,167	173		11,404	0.8	
Bahoa, C. Z.							180																180		
Hawaiian Islands	3,242		32	3,274					3,274	1,206							254			1,460			4,734	0.3	
Total, North America	475,630	12,656	58,420	546,756	5,984	916	17,411	25	536,380	105,442	11,221	1,899	21,159	36,555	5,787	7,436	7,473	164	123,089	280,225	6,907	451	983,963	63.8	
SOUTH AMERICA:																									
Chile	108,923	27,956	15,342	152,221			360	850	153,431	8,949	1,977	9	4,629	1,584	4,953	1,957	2,242	18	98,880	125,198	6		278,635	18.1	
Colombia	2,866			2,866			2,351		5,217														5,217	0.3	
Ecuador	9,434			9,434			2,158	8	11,600				126	144		83				353			11,976	0.8	
Peru	1,740			1,740			59		33,099	8,013	422	101	48	657	161		10,000	997	30,401	50,800			83,899	5.4	
W. coast S. America *	3,305			3,305			554		3,859	6				424					445	875			4,734	0.3	
Total, S. America	126,268	27,956	15,342	169,566	3,100		5,482	853	207,206	16,968	2,399	110	4,803	2,809	5,114	2,040	12,242	1,015	129,726	177,226	29		384,461	24.9	
AUSTRALASIA:																									
Australia	1,445			1,445	3,553				4,998	1,623			90						3,081	4,794			9,792	0.6	
New Zealand	3,300			3,300					3,300	30	2,250		4,767						12,038	19,085			62,529	4.0	
Australasia *	4,745			4,745	3,553				8,298	64,182	2,250		4,857						15,119	86,408			22,385	1.5	
Total, Australasia																							94,706	6.1	
ASIA:																									
Philippine Islands	38,600	14,553	53,162						53,162															53,162	3.4
China	2,278		48	2,326			469		2,795														2,795	0.2	
Japan	9,007			9,007			133	762	9,992														9,992	0.6	
Far East *	1,601			1,601					1,601					6,325					7,100	13,425			15,026	1.0	
Total, Asia	51,585	14,601	66,186				602	762	67,550					6,325					7,100	13,425			80,975	5.2	
Grand total	638,278	40,612	83,363	762,253	40,787	946	23,495	26,953	879,434	246,592	15,870	2,009	30,819	45,689	10,901	9,476	19,715	1,179	275,034	657,284	6,936	451	1,544,105	100.0	
Per cent of total cargo:																									
January, 1931	42.6	2.6	5.7	50.9	2.7	0.1	1.5	1.7	56.9	16.0	1.0	0.1	2.0	3.0	0.7	0.6	1.3	0.1	17.8	42.6	0.5		100.0		
January, 1930	52.8	1.6	4.6	59.0	1.2		0.9	1.8	62.9	14.9	1.1	0.1	1.4	3.0	0.4	0.4	0.5	0.1	14.8	36.7	0.4		100.0		
January, 1929	41.8	1.6	4.8	48.2	0.7	0.1	1.6	1.6	52.2	18.9	1.2	0.4	1.8	4.4	3.7	1.0	0.3	1.7	13.9	47.3	0.1	0.4	100.0		

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 21, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Normanstar.	14	18	40	15	1	30	15	10	11	12	415.6	Newcastle, Eng.	Vancouver, B. C.	Ballast.	1,575	7,517	5,458
Taybank.	14	23	55	15	2	55	15	12	38	13	490.0	Baltimore, Md.	Shanghai, China.	General.	1,575	7,623	5,412
June	15	2	30	15	5	05	15	14	35	15	426.0	Baltimore, Md.	Seattle, Wash.	General.	3,702	6,015	4,966
Christenson.	15	2	30	15	5	05	15	14	35	15	426.0	Baltimore, Md.	Seattle, Wash.	General.	3,702	6,015	4,966
Madaw	15	1	15	15	6	30	15	14	00	15	434.3	Houston, Tex.	Taoma, Wash.	General.	6,085	7,977	5,764
Luckenbach.	15	2	15	15	7	20	15	15	05	15	488.0	Roson, Mass.	Portland, Oreg.	General.	2,816	6,829	4,627
Nevadan.	15	2	15	15	7	20	15	15	05	15	488.0	Roson, Mass.	Portland, Oreg.	General.	2,816	6,829	4,627
Japan Arrow.	15	7	15	15	8	15	15	15	49	15	468.2	New York, N. Y.	La Libertad, Calif.	Ballast.	10,084	7,388	
El Clervo.	15	9	20	15	9	35	15	15	14	15	407.4	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	6,046	4,326	
Bradywine.	15	9	20	15	9	35	15	15	14	15	407.4	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	6,046	4,326	
Clewink.	15	9	20	15	9	35	15	15	14	15	407.4	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	6,046	4,326	
Comet.	15	15	55	15	18	35	15	10	29	16	11	28	Los Angeles, Calif.	Ballast.	9,820	6,777	
Tayama Maru.	16	2	30	16	3	10	16	12	13	16	445.0	Boston, Mass.	Shanghai, China.	Cotton, tobacco.	3,740	7,956	5,681
Japanese	16	2	30	16	3	10	16	12	13	16	445.0	Boston, Mass.	Shanghai, China.	Cotton, tobacco.	3,740	7,956	5,681
Prince.	16	4	45	16	8	25	16	14	55	16	411.6	New York, N. Y.	Manila, P. I.	General.	2,808	9,240	6,145
Kenosis.	16	4	45	16	8	25	16	14	55	16	411.6	New York, N. Y.	Manila, P. I.	General.	2,808	9,240	6,145
Loreto.	16	19	15	16	10	25	16	17	23	18	433.35	Indian, England.	San Francisco, Cal.	Military supplies.	1,913	4,127	
Villager.	16	19	15	16	10	25	16	17	23	18	433.35	Indian, England.	San Francisco, Cal.	Military supplies.	1,913	4,127	
Ammon.	16	00	40	16	11	55	16	19	40	17	338.0	Buenos Aires, Arg.	Vancouver, B. C.	General.	3,959	8,869	5,131
Alvarado.	16	00	40	16	11	55	16	19	40	17	338.0	Buenos Aires, Arg.	Vancouver, B. C.	General.	3,959	8,869	5,131
Bromoy.	16	14	10	16	12	20	16	21	05	17	338.0	New York, N. Y.	Los Angeles, Calif.	General.	1,609	3,334	2,221
Locoma.	16	14	10	16	12	20	16	21	05	17	338.0	New York, N. Y.	Los Angeles, Calif.	General.	1,609	3,334	2,221
Helo.	16	14	10	16	12	20	16	21	05	17	338.0	New York, N. Y.	Los Angeles, Calif.	General.	1,609	3,334	2,221
Somers.	16	20	00	17	4	15	17	14	31	17	460.0	Baltimore, Md.	Taoma, Wash.	General.	6,227	7,555	4,688
Grove.	17	6	05	17	6	20	17	16	01	17	404.6	Baltimore, Md.	Taoma, Wash.	General.	6,227	7,555	4,688
Tahina.	17	7	50	17	9	10	17	16	45	17	468.0	Amsterdam, Holland.	Los Angeles, Calif.	Ballast.	9,558	6,210	
Quebec City.	17	7	50	17	9	10	17	16	45	17	468.0	Amsterdam, Holland.	Los Angeles, Calif.	Ballast.	9,558	6,210	
Baarn.	17	6	25	17	10	00	17	17	45	17	400.0	Roson, Mass.	Vancouver, B. C.	General.	3,475	7,819	5,406
Chile.	17	12	10	18	2	50	18	11	10	18	435.0	Newcastle, England.	Corral, Chile.	General.	2,474	5,882	3,663
Kentuckian.	17	12	10	18	2	50	18	11	10	18	435.0	Newcastle, England.	Corral, Chile.	General.	2,474	5,882	3,663
Beaconlight.	17	18	45	18	4	30	18	13	21	18	414.5	Roson, Mass.	Seattle, Wash.	General.	2,663	7,049	4,941
Antietam.	17	22	05	18	6	15	18	14	53	18	435.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	7,482	5,133	
Katrina.	18	6	35	18	6	50	18	15	30	18	435.0	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	7,426	5,073	
Luckenbach.	18	7	30	18	8	05	18	16	12	18	446.0	Boston, Mass.	Seattle, Wash.	General.	3,663	8,508	6,179
Shogun.	18	12	35	18	8	10	18	16	09	18	446.0	Key West, Fla.	San Diego, Calif.	Ballast.	4,001	2,706	
Salvador.	18	2	25	18	9	00	18	17	35	18	316.8	Champeron, Guat.	San Diego, Calif.	General.	4,001	2,706	
San Gabriel.	18	6	00	18	9	05	18	16	35	18	316.8	Champeron, Guat.	San Diego, Calif.	General.	4,001	2,706	

* Tanker.

* Motor ship.

* Mine sweeper.

* Transport.

* Lubricating oil, coal, and general.

(9)

San Angelino	18	00	55	18	9	53	18	17	58	18	19	00	American	Quaker S. S. Co.	409	8	54	2	21	0	Philadelphia, Pa.	Portland, Oreg.	Coal, oil, general	3,451	6,755	4,887
Dillworth	18	15	38	18	10	45	18	19	07	18	20	23	American	Shell Oil Co.	435	0	55	0	20	0	New Orleans, La.	Los Angeles, Calif.	Ballast	7,441	5,077	
Orbita	18	15	35	19	6	00	19	14	31	19	15	30	British	Pacific Steam Nav. Co.	330	0	57	0	27	9	Liverpool, England	Talcahuano, Chile	General	1,577	16,844	11,731
Romulus	19	0	23	19	7	30	19	15	11	19	19	38	Norwegian	Latin American Line	347	4	56	0	20	0	Newcastle, England	Los Angeles, Calif.	General	4,195	5,125	3,741
Seeland	19	2	35	19	8	45	19	18	38	19	19	30	Swedish	Orange & S. Corp.	301	0	72	2	20	8	New York, N. Y.	Cruz Grande, Chile	Ballast	15,425	4,421	
Guldborg	19	12	45	19	14	30	19	21	49	19	23	00	Danish	Strange & Co.	385	0	54	2	15	6	Bridgeport, Conn.	Victoria, B. C.	Ballast	6,736	5,064	
Cauca	15	16	10	19	14	15	19	22	25	20	1	08	Colombian	National Navigation Co.	507	0	22	0	9	8	Cristobal, C. Z.	Buenaventura, Col.	General	178	262	161
President	20	0	05	20	6	40	20	13	53	20	21	00	American	Dollar Line	502	0	02	2	28	0	New York, N. Y.	San Francisco, Cal.	General	4,168	12,660	9,254
Polk	20	6	44	20	7	35	20	15	25	21	00	American	Panama-Pacific Line	574	4	80	3	27	0	New York, N. Y.	San Francisco, Cal.	General	2,722	24,506	17,565	
California	20	4	50	20	11	35	20	18	25	21	00	American	Grace Line	433	3	03	9	23	0	New York, N. Y.	Talcahuano, Chile	General	1,978	11,680	7,442	
Santa Clara	20	13	40	21	2	40	21	10	31	21	11	35	American	Sun Oil Co.	430	0	05	0	23	0	Clester, Pa.	Los Angeles, Calif.	Ballast	2,500	6,591	4,936
Northern Sun	21	0	40	21	4	15	21	13	34	21	12	00	Danish	Inter-Freighting Corp.	335	0	54	9	13	0	Philadelpha, Pa.	Antofagasta, Chile	Gen., dynamite	1,571	7,711	
Northern	21	2	55	21	5	35	21	13	45	21	15	00	British	Imperial Oil Co.	510	2	02	0	21	6	New York, N. Y.	Talara, Peru	Ballast	11,573	7,711	
Vancouver	21	4	50	21	7	10	21	13	45	21	16	20	American	Munson, McGow & Line	370	0	33	0	20	0	Baltimore, Md.	Seattle, Wash.	General	4,320	5,525	4,187
Murphy	17	21	00	21	7	30	21	15	15	22	7	59	American	United Fruit Co.	315	0	44	2	17	11	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,496	2,141	
Scottish	21	6	53	21	8	05	21	16	18	21	22	30	British	Anglo-Saxon Pet. Co.	426	0	56	9	20	0	Hamburg, Germany	Los Angeles, Calif.	Ballast	7,149	4,927	
Borcher	21	1	50	21	8	45	21	17	20	21	20	55	American	U. S. Navy	479	0	55	2	13	0	Norfolk, Va.	San Francisco, Cal.	Naval stores	1,441		
Bridge	21	8	03	21	10	25	21	19	35	21	20	55	American	Gulf Pac. Redwood Line	379	9	53	1	23	8	New Orleans, La.	San Francisco, Cal.	Lumber, general	6,136	5,667	4,103
City of	21	5	20	21	9	40	21	18	40	21	19	48	British	Ellerman & Bucknall	434	0	53	3	20	6	New York, N. Y.	Brisbane, Australia	General	2,192	9,194	6,915
Cambridge	18	21	55	21	11	25	21	15	45	21	20	18	American	A. V. Armour	231	5	34	4	11	3	Tela, Honduras	Bahoa, C. Z.	Ballast	1,504	966	
Utowana	20	4	05	21	12	09	21	20	15	22	00	18	German	Hamburg-American Line	402	2	61	2	19	6	Hamburg, Germany	Vancouver, B. C.	General	4,081	9,139	6,666
Portland	14	18	55	21	13	05	21	21	15	21	22	20	German	Roland Line	216	5	32	9	19	6	Cristobal, C. Z.	Guayaquil, Ecuador	General	1,001	1,105	698
Chil	21	13	08	21	20	15	22	9	18	22	10	37	Danish	Isbrandtsen Moller Co.	318	9	54	7	21	1	Baltimore, Md.	Yokohama, Japan	General	4,400		
Nel Maersk	21	18	40	21	21	15	22	10	19	22	11	48	Norwegian	Fern Line	381	6	53	3	20	3	Mobile, Ala.	Kobe, Japan	Cotton	4,090	6,100	4,240

7 Supply ship.
8 Yacht.
9 Tanker.

* Yacht.

* Supply ship.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

	15	4	20	15	6	18	15	14	55	15	14	55	American	Arrow Line	409	7	54	2	25	5	Portland, Oreg.	Philadelpha, Pa.	Lumber	7,514	6,693	4,903
Charles Christenson	15	4	20	15	6	18	15	14	55	15	14	55	American	Arrow Line	409	7	54	2	25	5	Portland, Oreg.	Philadelpha, Pa.	Lumber	7,514	6,693	4,903
Cauca	15	2	30	15	6	45	15	16	10	17	2	10	Colombian	National Navigation Co.	107	0	22	9	11	0	Acapulco, Mex.	Cristobal, C. Z.	Coffee	939	262	161
Helo	15	6	15	15	7	35	15	15	55	17	2	10	Norwegian	Panama Mail S. S. Co.	214	2	43	4	1	0	Acajutla, Salvador	Cristobal, C. Z.	(*)	274	1,158	722
Copia	14	22	10	15	9	15	15	19	00	15	23	00	British	Anglo-Saxon Pet. Co.	401	0	43	4	24	0	Guaymas, Mex.	Lands End, Eng.	Gasoline	7,159	6,328	4,607
Anerland	15	22	55	16	5	55	16	19	10	16	19	40	Swedish	Ore S. S. Corp.	561	0	72	0	34	3	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,650	15,560	4,496
Onondaga	15	22	10	16	7	10	16	20	10	20	20	30	American	Krusen Lumber Co.	281	0	43	6	19	0	Marchfield, Oreg.	New York, N. Y.	(*)	2,654	2,656	1,621
Western Sun	15	22	45	16	7	58	16	21	15	16	21	55	American	Sun Oil Co.	409	6	06	0	29	0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,214	9,607	6,551
Carl Legien	15	20	10	16	8	15	16	18	45	16	22	25	German	Hamburg-American Line	402	8	53	9	23	0	Hamburg, Germany	Hamburg, Germany	Gen., nitrates	6,177	7,145	5,474
Nanza	15	20	30	16	8	40	16	23	30	16	23	30	British	Earl & Stoddart	495	5	52	2	23	0	Valparaiso, Chile	Gibraltar	Wheat	7,415	5,583	4,073
Ester	16	12	30	16	13	51	17	9	50	17	13	15	German	North German Lloyd	402	8	03	0	27	0	Vancouver, B. C.	Hamburg, Germany	General	9,163	9,965	6,853
Santa Maria	16	11	15	16	15	19	16	23	10	17	2	05	American	Grace Line	495	5	63	2	24	0	Vancouver, B. C.	Hamburg, Germany	General	3,017	10,626	6,680
Naples Maria	16	16	10	16	16	49	17	2	05	17	2	05	Japanese	Philippine Sugar Co.	355	0	51	0	26	0	Talcahuano, Chile	New York, N. Y.	Sugar	7,700	6,207	4,970
Virgin	16	15	48	16	16	08	17	3	53	17	4	40	Dan	Isbrandtsen Moller Co.	392	2	44	2	22	0	Hilo, P. I.	New York, N. Y.	Sugar	4,200	3,212	2,180
Larsen	16	11	10	17	6	28	17	14	15	17	15	00	American	Panama-Pacific Line	586	4	80	3	29	0	Pulipandan, P. I.	New York, N. Y.	General	7,360	25,254	18,170
Nel Maersk	16	5	25	17	6	28	17	15	15	17	15	00	American	The Texas Co.	509	7	70	3	32	0	San Francisco, Cal.	New York, N. Y.	Gasoline	16,742	12,514	8,427
Australia	16	21	55	17	7	30	17	15	30	17	17	30	Belgium	Compagnie Mar. Belge	430	0	58	2	25	0	Los Angeles, Calif.	New York, N. Y.	General	8,17	7,675	5,595
Cauca	17	00	50	17	3	01	17	16	30	17	18	00	Danish	East Asiatic Co.	410	0	55	2	28	0	Seattle, Wash.	Hull, England	Wheat, general	9,056	7,013	5,317
Tonking	17	00	50	17	3	01	17	16	30	17	18	00	Danish	East Asiatic Co.	410	0	55	2	28	0	Seattle, Wash.	Copenhagen, Den.	(*)	9,056	7,013	5,317

* For orders.

* Motor ship.

* Tanker.

* Wheat, barley, and general.

Vermar.....	20 19.00	20 19.54	21 4.00	21 4.00	American.....	Calmar S. S. Corp.....	410.5	54.2	25.0	Aberdeen, Wash.....	Philadelphia, Pa.....	Lumber.....	7,182	6,585	4,791
Santa Elisa.....	20 18.25	21 6.33	21 18.20	21 21.35	American.....	Grace Line.....	360.3	51.7	24.0	Valparaiso, Chile.....	New York, N. Y.....	General.....	4,100	5,937	4,325
Madras City.....	21 2.00	21 8.48	21 19.10	22 8.05	British.....	Readorn Smith Line.....	383.9	53.5	24.3	Suva, Fiji Islands.....	Lands End, Eng. ¹⁶	Sugar.....	7,122	5,913	4,377
L-63 ²⁴	21 8.55	21 8.55	21 21.25	22 8.05	American.....	U. S. Army.....	365.0	51.0	24.0	Balboa, C. Z.....	Cristobal, C. Z.....	Ballast.....	6,842	.....	.....
Gibraltar.....	21 9.56	21 10.59	21 20.30	21 21.25	British.....	Wessel, Duval & Co.....	401.1	54.2	25.0	Iquique, Chile.....	Savannah, Ga.....	Nitrate of soda.....	7,900	6,752	5,161
West Lynn.....	21 10.30	21 11.18	21 20.45	21 20.45	British.....	Sir W. R. Smith & Sons.....	450.0	58.5	28.0	Vancouver, B. C.....	London, England.....	General.....	5,806	8,561	5,815
Royal Star.....	21 11.45	21 12.29	21 22.10	22 4.50	British.....	U. S. Navy.....	.....	.....	.....	N. Westminster, B. C.....	Newcastle, England.....	Frozen, general.....	.....	.....	.....
Swan ²⁵	21 12.05	21 19.50	21 19.50	21 19.50	American.....	Blue Star Line.....	.....	.....	.....	Balboa, C. Z.....	Cristobal, C. Z.....	Ballast.....	.....	.....	.....

²⁴ Launch.²⁵ Tug.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.					* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—		
February 15.....	Ulua.....	United Fruit Co.....	Port Limon, Costa Rica.....	February 15.....	No. 9670 ²⁷	Pan American Airways.....	San Salvador and waypts. ^{ts}		
February 16.....	Cuba.....	French Line.....	Hayre via wayports.....	February 15.....	No. 668-M ²⁷	Pan American Airways.....	Miami via wayports.....		
February 16.....	Atlantis.....	Royal Mail Steam Packet Co.....	Southampton via waypts. ^{ts}	February 15.....	Ulua.....	United Fruit Co.....	New York via Habana.....		
February 16.....	Escupe Fuego ²⁶	Conolly & Papi.....	Bluefields, Nicaragua.....	February 16.....	Cartago.....	United Fruit Co.....	New Orleans and waypts. ^{ts}		
February 16.....	Sixola.....	Spanish S. S. Line.....	Barcelona via wayports.....	February 16.....	Cristobal.....	Panama R. R. S. S. Line.....	New York via wayports.....		
February 16.....	Cundinamarca C-33 ²⁷	United Fruit Co.....	Cartagena, Colombia.....	February 17.....	Orinoco.....	Royal Mail Steam Packet Co.....	Southampton via waypts. ^{ts}		
February 17.....	Inapaquina ²⁸	Scelta Airplane Co.....	Barranquilla and waypts. ^{ts}	February 17.....	Atlantis.....	Hamburg-American Line.....	Port Limon, Costa Rica.....		
February 17.....	Orinoco.....	A. Tagaropulos.....	Colon, Rep. of Panama.....	February 17.....	Inapaquina ²⁸	A. Tagaropulos.....	Colon, Rep. of Panama.....		
February 17.....	Calamares.....	Hamburg-American Line.....	Hamburg via wayports.....	February 18.....	No. 9664 ²⁷	Pan American Airways.....	Miami via wayports.....		
February 18.....	No. 144-M ²⁷	Pan American-Grace Airways.....	Talara via wayports.....	February 18.....	Escupe Fuego ²⁶	Pan American Airways.....	Bluefields, Nicaragua.....		
February 18.....	Zacapa.....	United Fruit Co.....	New York via Kingstons.....	February 18.....	Sixola.....	Conolly & Papi.....	New York via Kingstons.....		
February 18.....	Iriona.....	United Fruit Co.....	New Orleans, La.....	February 18.....	Cuba.....	United Fruit Co.....	Hayre via wayports.....		
February 18.....	No. 669-M ²⁷	Pan American Airways.....	Miami via wayports.....	February 19.....	Iriona.....	United Fruit Co.....	Port Limon, Costa Rica.....		
February 19.....	No. 9670 ²⁷	Pan American Airways.....	San Salvador and waypts. ^{ts}	February 19.....	Zacapa.....	Pan American Airways.....	Curacao via wayports.....		
February 19.....	Arafa ²⁹	R. Feuillebois.....	Colon, Rep. of Panama.....	February 19.....	Calamares.....	United Fruit Co.....	New York via wayports.....		
February 20.....	Atlantis.....	Standard Fruit & S. S. Co.....	New Orleans via Habana.....	February 19.....	Magallanes.....	United Fruit Co.....	Port Limon, Costa Rica.....		
February 21.....	Orinoco.....	United Fruit Co.....	Port Limon, Costa Rica.....	February 20.....	Cundinamarca C-33 ²⁷	Spanish S. S. Line.....	Barcelona via wayports.....		
February 21.....	Orinoco.....	Hamburg-American Line.....	Port Limon, Costa Rica.....	February 20.....	Magallanes.....	Scelta Airplane Co.....	Barranquilla and waypts. ^{ts}		
February 21.....	Orinoco.....	Anchor Line.....	New York via wayports.....	February 21.....	Iriona.....	United Fruit Co.....	New Orleans and waypts. ^{ts}		
February 21.....	No. 145-M ²⁷	Pan American Airways.....	Curacao via wayports.....	February 21.....	Atlantis.....	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.....		
February 21.....	No. 670-M ²⁷	Pan American Airways.....	Miami via wayports.....	February 21.....	Annetta I. ²⁸	A. Tagaropulos.....	Colon, Rep. of Panama.....		
February 21.....	No. 9664 ²⁷	Pan American-Grace Airways.....	San Salvador and waypts. ^{ts}	February 21.....	.....	.....	.....
February 21.....	No. 144-M ²⁷	Pan American-Grace Airways.....	Talara via wayports.....	February 21.....	.....	.....	.....
February 21.....	Annetta I. ²⁸	A. Tagaropulos.....	Colon, Rep. of Panama.....	February 21.....	.....	.....	.....

²⁶ Motor schooner.²⁷ Air mail carrier.²⁸ Motor boat.²⁹ Schooner.

PORT OF BALBOA.

February 17.....	Real ³⁰	Hans Elliot.....	Panama Bay, R. P.....	February 17.....	Real ³⁰	Hans Elliot.....	Panama Bay, R. P.....
February 19.....	Frost ³¹	West India Oil Co.....	San Jose de Guatemala.....	February 21.....	Neiva Panama ³²	Hans Elliot.....	Panama Bay, R. P.....
February 20.....	Neiva Panama ³²	Hans Elliot.....	Panama Bay, R. P.....	February 20.....	Real ³⁰	El Libertador ³⁰	Panama Bay, R. P.....
February 20.....	Real ³⁰	Hans Elliot.....	Panama Bay, R. P.....	February 20.....	Dos Hermanos ³⁰	A. Valdez.....	Panama Bay, R. P.....
February 20.....	El Libertador ³⁰	A. Valdez.....	Panama Bay, R. P.....	February 20.....	Dos Hermanos ³⁰	A. Valdez.....	Panama Bay, R. P.....
February 20.....	Dos Hermanos ³⁰	A. Valdez.....	Panama Bay, R. P.....	February 20.....	Dos Hermanos ³⁰	A. Valdez.....	Panama Bay, R. P.....

³⁰ Motor schooner.³¹ Motor ship.

* Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending February 14, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Dorelian	Leyland S.S. Line.	February 8.	February 8.	(¹)	60
City of Panama	Panama Mail S. S. Co.	February 8.	February 8.		1,018
Rugia	Hamburg-American Line.	February 8.	February 8.		596
Parismina	United Fruit Co.	February 8.	February 8.		13
Pastores	United Fruit Co.	February 8.	February 8.	24	595
Cauca	National Navigation Co.	February 8.	February 9.	192	97
San Francisco	Hamburg-American Line.	February 8.	February 9.	43	343
Teutonia	Hamburg-American Line.	February 8.	February 9.	61	26
Wiegand	North German Lloyd	February 8.	February 11.	92	214
Pearl Marie	R. Feuillebois	February 8.	February 9.		24
Ecuador	Panama Mail S. S. Co.	February 9.	February 10.	38	541
Georgio	French Line.	February 9.	February 10.	597	(¹)
Baralt	Royal Netherlands S. S. Co.	February 9.	February 11.	399	26
Schwaben	North German Lloyd	February 10.	February 10.	74	37
Caldas	National Navigation Co.	February 10.	February 10.	(¹)	69
California	Nav. Libera-Triestina.	February 10.	February 10.	(¹)	279
Knute Nelson	Fred Olsen & Co.	February 10.	February 10.	144	(¹)
Simon Bolivar	Royal Netherlands S. S. Co.	February 10.	February 11.	223	20
Esparta	United Fruit Co.	February 10.	February 14.	428	(¹)
Ulua	United Fruit Co.	February 11.	February 11.	314	8 ¹ / ₂
Murla	North German Lloyd	February 11.	February 11.	44	55
Lochmonar	Royal Mail S. P. Co.	February 11.	February 11.	223	76
Tela	United Fruit Co.	February 11.	February 12.	687	49 ¹ / ₂
Covalleria	Aluminium Line.	February 11.	February 12.	263	(¹)
Sixaola	United Fruit Co.	February 11.	February 12.	317	325
Cristobal	Panama R. R. S. S. Line.	February 11.	February 11.	2,929	
San Julian	Pacific-Atlantic S. S. Co.	February 12.	February 12.	182	(¹)
Oregon	French Line.	February 12.	February 12.	74	195
Pacific Ranger	Furness, Withy & Co.	February 12.	February 13.	(¹)	528
Guatemala	Panama Mail S. S. Co.	February 12.	February 13.	762	202
Salvador	Pacific Steam Navigation Co.	February 12.	February 12.	367	
Vestvanger	Aluminium Line.	February 13.	February 14.	653	64
Amapala	Standard Fruit & S. S. Co.	February 13.	February 14.	299	371
Tela	United Fruit Co.	February 13.	February 14.	835	395
Santa Teresa	Grace Line.	February 13.	February 14.	5	253
Durazzo	Hamburg-American Line.	February 13.	February 14.		102
Nosa King	N. O. & S. A. S. S. Co.	February 14.	February 14.	278	450
Martinique	Colombian S. S. Line.	February 14.	February 14.	201	1
Cartago	United Fruit Co.	February 14.	February 14.	355	
Simon Bolivar	Royal Netherlands S. S. Co.	February 14.	February 14.	27	915
Kinderdijk	Holland-America Line.	February 14.	February 14.	11	294
Call	North German Lloyd	February 14.	February 14.	560	
Kwanto Maru	Osaka Shosen Kaisha	February 14.	February 14.	663	

* No cargo discharged.

* No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective February 20, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.31
Bronze, Tobin, average	Lb.	.26
Gasoline, motor grade	Gal.	.12
Metal, yellow	Lb.	.29
Oakum, Navy, spun	Lb.	.12
Oakum, Navy, unspun	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.41
Oil, kerosene, in drums	Gal.	.08
Oil, marine engine	Gal.	.50
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.12
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.16

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Ancon.....	February 17..	February 22..	February 25..	March 1.....	March 4.....	March 9.
Cristobal.....	March 3.....	March 8.....	March 11.....	March 15.....	March 18.....	March 23.
Ancon.....	March 17.....	March 22.....	March 25.....	March 29.....	April 1.....	April 6.
Cristobal.....	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.
Ancon.....	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.
Cristobal.....	April 23.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.
Ancon.....	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.
Ancon.....	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.
Ancon.....	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.

* Effective April 28th, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.....	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.....	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.....	
Ward 7, White females, private rooms.....	
Ward 8, Obstetrical department, white females.....	
Nursery.....	No visitors permitted in nursery.
Section "C:"	
Ward 9, Colored, male.....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.....	
Ward 11, Colored, male (surgical).....	
Ward 12, Colored, male (medical).....	
Ward 13, Colored, male, G. U.....	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 14, White, male, G. U.....	
Section "D:"	
Ward 15, American, male (surgical).....	Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).....	
Ward 17, Colored children.....	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.....	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).....	Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.....	
Isolation section.....	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office. Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature. Degrees F.
	Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 18).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months' observations at Cristobal and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 4, 1931. No. 31.

Canal Traffic During February.

During the month of February, 1931, 431 commercial vessels and 2 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,915,902.78, and on the launches \$13.08, or a total tolls collection of \$1,915,915.86.

The daily average of commercial vessels was 15.39, and the average tolls collection was \$68,425.10, as compared with an average of 15.35 transits and \$68,004.53 in tolls for the previous month, and an average of 17.54 transits and \$76,120.93 in tolls for February, 1930. The average amount of tolls paid by each of the commercial transits was \$4,445.25, as compared with \$4,428.87 for the previous month, and \$4,340.91 for February, 1930.

With respect to the number of transits traffic for the past month was the smallest since November, 1926, when 428 commercial vessels were passed through the Canal, and the lowest February traffic since 1926, when 424 vessels were transited. The daily average number of transits, however, for the past month was only slightly lower than the daily average number of transits for the preceding 7 months of the current fiscal year (15.71).

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 8 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 8 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,329.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
Total, first 8 months of fiscal year 1931.....	3,809	16,921,812.31	15.67	69,637.09
Total, first 8 months of fiscal year 1930.....	4,224	18,320,231.52	17.38	75,391.90
Total, first 8 months of fiscal year 1929.....	4,310	18,078,071.55	17.74	74,395.35

In comparison with the first 8 months of the fiscal year 1930, the corresponding period this year has had 415 fewer transits and \$1,398,419.21 less tolls, decreases of 9.8 per cent and 7.6 per cent, respectively.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, February 28, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)		Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.					
	Day.	Hour.	Day.	Hour.	Day.	Hour.		Day.	Hour.							Nature.	Tons.	Net.			
Californian ¹	21	21	20	22	5	25	22	12	35	22	13	38	American.	Amer.-Hawaiian Line.	445.1	59.8	21.3	General.	3,585	8,567	6,020
Recorder ²	21	10	30	22	6	00	22	14	13	22	15	15	British.	T. & J. Harrison.	420.3	54.6	17.11	Ballast.	6,652	4,402	
Albatross ³	22	6	30	23	9	15	23	16	44	23	17	32	British.	British Molasses Co.	475.0	63.3	19.6	Ballast.	9,587	6,879	
Pacific Spruce ⁴	22	14	05	23	0	05	23	9	23	20	13	30	American.	Dixon S. S. Corp.	409.0	54.2	21.0	General.	5,218	6,624	4,841
Roxen ⁵	22	17	40	23	3	55	23	10	30	23	11	38	Swedish.	Transatlantic S. S. Co.	377.0	54.0	24.0	General.	6,235	4,486	
Buyo Maru ⁶	22	19	35	23	3	50	23	11	28	23	12	45	Japanese.	Kokusai Kisen Kaisha.	400.0	53.0	25.0	General.	6,655	5,931	4,213
Seison ⁷	22	8	45	23	7	20	23	15	25	23	16	35	British.	British Government.	702.0	106.0	31.6	Ballast.			
Sapelo ⁸	23	5	01	23	7	05	23	17	25	23	18	35	American.	U. S. Navy.	461.0	80.0	29.6	Fuel oil.			
Ponybryn ⁹	22	22	05	23	7	15	23	19	20	23	17	35	Norwegian.	Andrew Weir & Co.	371.0	61.4	25.0	Ballast.	5,147	3,946	
Steel Ranger ¹⁰	22	22	15	23	8	55	23	17	39	23	18	54	American.	Ishtman S. S. Lines.	424.2	56.2	25.0	General.	7,193	7,611	5,450
Algrid ¹¹	22	1	55	23	9	50	23	18	13	23	19	24	Norwegian.	Anglo-Saxon Pet. Co.	420.3	57.2	19.4	Ballast.			
Alaska ¹²	22	22	10	23	11	05	23	18	53	23	20	00	French.	Amex.-Sixton Pet. Co.	425.0	55.0	19.3	General.	1,165	6,990	4,954
Ashburton ¹³	22	8	35	23	11	40	23	19	13	24	4	15	British.	French & Australian Line	400.0	52.0	18.6	General.	3,720	5,997	3,307
Southern ¹⁴	23	8	15	23	12	00	23	20	18	23	21	00	British.	D. G. Dunn.	50.0	14.0	7.6	Ballast.	36	21	
Delidijk ¹⁵	23	10	35	23	13	00	23	20	27	23	21	29	Dutch.	N. Pacific Coast Line.	490.0	64.6	21.6	General.	3,435	11,724	8,266
Emil Kindorf ¹⁶	23	16	35	24	0	15	24	19	20	24	22	08	German.	Hamburg-Germany	410.0	64.0	19.0	General.	2,404	7,141	5,405
Canal ¹⁷	23	10	43	24	3	33	24	10	20	24	13	35	American.	Brooklyn, N. Y.	436.0	58.0	25.0	General.	550		
San Simon ¹⁸	23	20	09	24	3	05	24	11	24	24	15	40	American.	Quaker Line.	410.3	54.3	18.5	General.	1,962	6,573	4,916
Kwasul ¹⁹	24	00	50	24	5	05	24	12	07	24	13	10	Japanese.	Osaka Shosen Kaisha.	461.0	61.0	21.3	General.	2,816	9,414	6,803
Maru ²⁰	24	1	15	24	6	20	24	12	41	24	15	10	British.	Barber S. S. Line.	424.2	63.0	21.0	General.	4,148	6,537	4,537
Bolton Castle ²¹	24	3	30	24	6	55	24	12	41	24	15	10	American.	Neison Line.	380.0	53.1	17.0	General.	1,510	6,659	4,133
Charles Nelson ²²	24	6	15	24	7	20	24	12	34	24	13	00	British.	Atl. Pacific Nav. Co.	232.0	30.0	15.0	General.	490	1,076	567
Prince Albert ²³	24	8	05	24	8	15	24	16	37	24	13	00	American.	Calmar S. S. Corp.	400.0	36.2	25.0	General.	6,811	7,381	5,595
Alamar ²⁴	23	17	23	24	14	20	24	22	38	24	23	38	American.	Panama R. R. S. S. Line.	251.0	43.6	17.0	General.	353	2,871	1,944
Guyaquil ²⁵	24	7	35	24	14	30	24	22	45	24	22	45	British.	Donaldson Brothers.	425.0	56.0	17.3	General.	601	7,827	6,442
Guyaquil ²⁶	24	11	45	24	19	35	25	10	31	25	11	27	American.	Ishtman S. S. Lines	424.0	56.0	26.11	General.	8,025	7,611	5,450
Alston City ²⁷	24	16	25	24	20	25	25	9	15	25	10	11	American.	Lukenbach Line.	448.0	60.0	22.0	General.	4,000	9,294	6,861
Lukenbach ²⁸	24	14	25	25	2	13	25	12	35	25	13	50	French.	French Line.	470.0	61.0	18.3	General.	67	10,458	7,110
Washington ²⁹	24	19	05	25	3	10	25	13	50	25	13	50	American.	U. S. Navy.	380.0	54.0	27.10	General.	3,508	7,070	5,028
Recher ³⁰	25	1	00	25	3	10	25	13	48	25	15	00	American.	Amer.-Hawaiian Line.	407.7	53.7	20.0	General.	1,813	6,033	4,353
Longstar ³¹	24	5	55	25	6	10	25	14	23	25	20	30	American.	Panama Mail S. S. Co.	380.0	48.7	23.1	General.			
Venezuela ³²	25	7	30	25	7	40	25	15	15	25	16	20	Norwegian.	Fred Olsen & Co.	425.5	55.3	22.0	General.	5,352	7,553	5,673
Georgia ³³	25	7	30	25	7	40	25	15	15	25	16	20	Norwegian.	Transport.				General, iron.			
Washington ³⁴	25	7	30	25	7	40	25	15	15	25	16	20	Norwegian.	Yacht.				General, iron.			

¹ Tanker. ² Motor ship. ³ Battleship. ⁴ Yacht. ⁵ Transport. ⁶ Cruiser.

California	25	13	40	25	14	30	25	23	12	25	12	15	American	Standard Oil Co.	513	68	2	24	0	London, England.	San Francisco, Cal.	11,719	8,619
Black Douglas	25	10	25	25	14	30	25	22	55	1	9	10	American	Robert C. Robbing	150	32	0	12	0	Norfolk, Va.	Galapagos Island.	373	238
Gen. G. W.																							
Getty	25	21	25	25	8	45	25	15	25				American	U. S. Army.	89	0	22	0	Cristobal, C. Z.	Balboa, C. Z.	6,931	4,999	
Ronoke	25	21	25	25	1	30	25	9	05	26			American	The Texas Co.	416	8	56	1	Baltimore, Md.	Los Angeles, Calif.	7,481	4,999	
S. C. T. Dodd	25	00	45	25	2	50	25	10	36	26			American	Shell Oil Co.	425	0	57	2	0	Los Angeles, Calif.	7,481	4,975	
Vagabondia	25	21	25	25	3	50	25	13	12	27			American	W. L. Melon.	201	6	34	0	0	Galapagos Island.	929	466	
Portefolio	25	3	40	25	5	30	25	13	18	27			Norwegian	Continental Transp. Co.	378	8	50	0	0	Vancouver, B. C.	480	5,572	
Point Bonita	26	3	30	25	6	30	25	14	36	26			British	Gulf Pacific Line.	324	0	46	2	0	Seattle, Wash.	3,398	2,617	
Deedoor	26	9	25	25	2	40	25	17	20	26			British	Continental Grain Co.	375	0	52	6	0	Vancouver, B. C.	6,080	4,616	
Julia	12	20	26	14	30	26	22	10	26	23	00		American	Lukenbach Line.	436	0	57	0	0	Houston, Tex.	4,655	8,543	
Lukenbach.	26	7	15	27	00	27	9	30	27	18	15		American	Ore S. Corp.	500	3	72	0	0	Seattle, Wash.	15,551	4,297	
Steeble	26	19	35	27	2	25	27	10	35	27	18	15	British	N. Z. Shipping Co.	531	0	70	0	0	Cruz Grande, Chile	6,123	18,205	
Raiglane	25	14	40	27	3	00	27	12	08				American	U. S. Navy.	495	0	56	0	28	1	Auckland, N. Z.	13,494	
Cuyana																							
Constance	27	1	50	27	5	10	27	15	41	27	17	00	American	Arrow Line	409	6	54	2	0	Baltimore, Md.	2,219	4,891	
Chandler	27	6	40	27	6	55	27	16	38	28	3	46	American	Amer-Hawaiian Line.	414	0	55	0	0	Seattle, Wash.	2,562	7,717	
Willboro	27	6	40	27	7	50	27	17	31	28	18	58	Norwegian	Standard Shipping Co.	408	3	53	0	0	Seattle, Wash.	7,717	5,763	
Markland	27	7	25	27	7	50	27	18	25	28	18	30	German	Hamburg-American Line	227	2	34	4	0	Talara, Peru.	4,174	4,321	
Carigo	20	20	45	27	10	40	27	17	35	28	21	20	Colombian	National Navigation Co.	116	0	21	1	0	Guayaquil, Ecuador	75	1,921	
Maidan	20	18	55	27	10	34	27	18	20	28	21	20	American	Carl Tucker.	200	0	34	2	0	Buenavista, C. Z.	200	1,214	
Migrant	27	12	50	27	13	30	27	10	54				Italian	U. S. Gen. Italiana.	484	0	62	0	0	Key West, Fla.	686	332	
Virgilio	26	7	40	27	23	35	28	18	18	28	16	55	American	N. S. Army.	436	0	58	0	0	Valparaiso, Chile.	2,286	9,829	
St. Michel	26	22	03	28	1	15	28	10	10				American	U. S. Navy.	436	0	58	0	0	Balboa, C. Z.	646		
Nedra	26	20	45	28	2	05	28	11	13				American	Grace Line	455	0	55	0	0	Balboa, C. Z.			
Santa Rita	27	12	08	28	3	48	28	12	19	28	20	10	American	Panama Mail S. S. Co.	370	0	52	0	0	Valparaiso, Chile.	2,037	6,255	
Corinto	22	16	40	28	6	28	16	00	28	16	55	American	United Fruit Co.	281	0	40	14	0	Cristobal, C. Z.	San Francisco, Cal.	240	1,352	
Suriname	24	13	48	28	6	15	28	16	04	1	6	50	American	R. W. James & Co.	336	7	41	9	0	Cristobal, C. Z.	San Francisco, Cal.	3,667	2,829
Negrada	27	22	28	28	7	20	28	17	05	28	19	40	Chilean	West Indian Trad. Co.	410	9	50	7	0	Valparaiso, Chile.	176	4,478	
Stensby	27	23	48	28	8	55	28	18	04	28	18	00	Danish	R. W. Jones & Co.	350	2	50	17	1	Aalborg, Denmark.	2,003	6,917	
Vimoor	27	6	40	28	9	00	28	18	25	1	1	29	British	W. Runciman & Co.	375	0	52	6	0	Wellingtong, N. Z.	4,203	6,099	
Silverteak	28	11	15	28	11	25	28	18	55	28	20	00	British	Kerr Line.	456	0	62	19	3	Penang, Straits Settlement.	4,001	9,618	
Nobaskan.	28	12	45	28	13	20	28	20	43	28	22	00	American	Amer-Hawaiian Line.	471	0	59	0	19	11	Portland, Oreg.	3,537	6,638
Pacific																							
Reliance	28	7	05	28	19	55	1	9	11	1	10	10	British	Furness, Withy & Co.	468	0	60	1	18	9	Vancouver, B. C.	1,467	9,644
Arrow	28	16	00	28	20	55	1	10	06	1	10	10	British	Standard Transp. Co.	436	3	63	0	19	6	Los Angeles, Calif.	9,744	7,140

• 90 T

1 Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

21	Agneworld	21	14.50	22	6.04	22	14.02	22	14.40	American...	Richfield Oil Co., Calif.	429.3	59.2	27.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	11,588	7,720	5,615
21	Empire Star	21	21.40	22	7.00	22	15.35	22	15.35	British...	Blue Star Line...	423.0	56.0	25.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	4,339	7,752	5,621
22	Empire Star	22	1.30	22	8.05	22	16.40	22	16.40	American...	Panama Mail S. Co.	261.1	47.0	17.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	1,348	2,354	1,549
22	Empire Star	22	7.00	22	8.45	22	19.55	22	20.55	American...	DuPont of Nemours	400.0	32.0	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	7,225	5,730	4,011
22	Empire Star	22	4.00	22	8.58	22	18.45	22	18.45	Colombian...	National Navigation Co.	116.0	21.1	9.4	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	195	211	124
22	Empire Star	22	9.29	22	9.29	22	18.55	22	10.15	American...	U. S. Navy	477.0	60.0	30.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	195	211	124
22	Empire Star	22	9.17	22	9.17	22	18.45	22	18.45	American...	U. S. Navy	187.0	35.0	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	195	211	124
22	Empire Star	22	10.30	22	11.32	22	20.45	22	21.55	American...	Anglo-Chilean Nitrates	400.0	32.0	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	195	211	124
22	Empire Star	22	9.00	22	14.00	22	21.25	22	23.20	Panamanian...	Barber Line...	461.9	50.6	25.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline...	195	211	124
											* Motor ship.									
											* Aircraft tender.									
											* Mine sweeper.									
											* Tanker.									

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrival at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).		Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.										Nature.	Tons.	Gros.	Net.
India ¹¹ .	22	14.30	22	15.35	22	23.15	22	23.15	Danish.	East Asiatic Co.	470.3	63.7	30.0			Vancouver, B. C.	Copenhagen, Den.	Gas oil.	12,149	11,157	8,336
Dungannon ¹ .	22	15.30	22	16.18	23	00.20	23	00.20	American.	The Texas Co.	435.0	56.0	27.1			Los Angeles, Calif.	Pt. Arthur, Tex.	Nitrates.	10,000	7,628	5,308
Norbo ¹¹ .	22	16.15	22	17.00	23	1.55	23	2.45	Danish.	Inter. Freightage Corp.	380.0	53.0	26.1			Antofagasta, Chile.	Charleston, S. C.		7,960	6,190	4,569
Capt. Edw. P.																					
Nones ¹² .	22	19.45	23	6.57	22	15.30	22	15.30	American.	U. S. Army.	101.4	23.5				Balboa, C. Z.	Cristobal, C. Z.	Crude oil.	7,892	6,046	4,326
El Cervo ¹² .	22	19.45	23	6.57	22	15.30	22	15.30	British.	Anglo-Ecu. Oilfields.	407.4	52.2	26.0			La Libertad, Ecu.	Philadelphia, Pa.	Nitrates.	7,725	5,593	4,069
Uganda ¹² .	23	2.35	23	6.47	23	18.35	23	18.35	British.	DuPont, New York.	402.1	52.2	25.0			Tocopilla, Chile.	Savannah, Ga.				
S-15 ¹² .	23	7.01	23	7.01	23	17.30	23	17.30	American.	U. S. Navy.	201.0	20.0				Balboa, C. Z.	Cristobal, C. Z.				
Chr. Knudsen ¹² .	23	7.00	23	8.21	23	19.35	23	19.35	Norwegian.	Canadian Transp. Co.	381.2	54.7	25.0			Portland, Oreg.	Belfast, Ireland.	Lumber, general.	7,525	6,033	4,561
Cragness ¹² .	23	12.20	23	13.28	23	20.55	23	20.55	British.	Empire Shipping Co.	412.1	55.0	25.0			Vancouver, B. C.	St. Nazaire, France.	Wheat.	7,900	7,022	5,250
Brimanger ¹² .	23	17.00	23	17.45	24	1.05	24	1.05	Norwegian.	Westfal, Larsen & Co.	415.0	54.9	18.0			Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	2,213	6,853	5,246
Suriname.	23	14.15	24	6.13	24	13.45			American.	United Fruit Co.	336.7	41.9	19.0			San Francisco, Cal.	Cristobal, C. Z.	General, coffee.	871	3,667	2,329
Claxton, No. 140 ¹⁴ .									American.	U. S. Navy.	310.0	30.0				Balboa, C. Z.	Cristobal, C. Z.	Lumber.	9,000	8,324	6,036
Pomona.	24	00.05	24	6.49	24	15.20	24	15.20	American.	Weyerhaeuser Tim. Co.	440.0	56.0	28.3			Longview, Wash.	Newark, N. J.				
Gen. G. W.																					
Getty ¹⁵ .	24	6.53	24	6.53	24	15.30			American.	U. S. Army.	98.0	22.0				Balboa, C. Z.	Cristobal, C. Z.	General.	1,436	12,533	7,516
Colombo.	24	5.30	24	7.35	24	16.15	26	11.00	Italian.	Nav. Gen. Italiana.	518.0	64.0	25.0			Valparaiso, Chile.	Genoa, Italy.	General, lumber.	7,025	7,380	5,339
Alaskan.	24	7.45	24	8.25	24	19.05	24	19.05	American.	Amer.-Hawaiian Line.	415.0	53.7	24.0			Portland, Oreg.	Boston, Mass.				
K. I.																					
Luckenbach.	24	11.30	24	12.17	24	20.05	24	20.05	American.	Luckenbach Line.	446.0	56.1	29.0			Portland, Oreg.	Boston, Mass.	General.	8,407	8,552	6,236
Pacific.																					
Enterprise ¹² .	24	11.45	24	13.12	24	21.05	24	23.35	British.	Furness, Withy & Co.	435.0	60.1	27.4			Vancouver, B. C.	Glasgow, Scotland.	General.	8,875	9,641	6,989
Marore.	24	8.10	24	16.47	25	13.40	25	13.40	American.	Bethlehem Steel Corp.	550.3	72.2	34.3			Cruz Grande, Chile.	Baltimore, Md.	Iron ore.	21,160	15,551	4,297
Cuyama ¹ .	25	6.26	25	6.26	25		25		American.	U. S. Navy.	455.0	56.0				Balboa, C. Z.	Cristobal, C. Z.				
Sapelo ¹ .	25	7.10	25	7.10	25		25		American.	U. S. Navy.	477.0	60.0				Balboa, C. Z.	Cristobal, C. Z.				
Pakela.	25	5.30	25	8.11	25	16.05	25	19.10	British.	Shaw, Savill & Albion.	477.5	63.1	24.3			Auckland, N. Z.	London, England.	Frozen, general.	4,700	11,018	8,057
Acajula.	25	14.20	25	17.24	26	2.30	26	2.30	British.	Pacific Steam Nav. Co.	215.7	33.6	14.0			Champerico, Guat.	Cristobal, C. Z.		452	1,273	706
Syra.	25	14.40	25	15.38	26	2.35	27	14.50	German.	Hamburg-American Line	307.4	43.8	16.0			Champerico, Guat.	Hamburg, Germany	Coffee, general.	1,370	3,350	2,292
Salinas ¹ .	25	14.40	25	15.49	25	23.50	27	18.10	American.	U. S. Navy.	463.0	60.0				Balboa, C. Z.	Cristobal, C. Z.				
Illinois ¹ .	26	4.00	26	6.12	26	14.20	26	14.20	American.	The Texas Co.	360.8	51.6	26.0			Los Angeles, Cal.	New York, N. Y.	Gasoline.	8,083	6,945	5,032
El Salvador.	25	12.10	26	6.32	26	15.15	27	14.00	American.	Panama Mail S. S. Co.	416.2	56.1	25.0			San Francisco, Cal.	New York, N. Y.	General.	3,065	5,710	4,011
Marian Otis.																					
Chander.	25	20.35	26	7.12	26	16.10	26	16.10	American.	Arrow Line.	409.6	54.1	24.3			Portland, Oreg.	Norfolk, Va.	Lumber.	7,632	6,653	4,863
Pennsylvania.	25	22.00	26	7.50	26	19.40	27	15.55	French.	French Line.	400.4	51.9	26.0			San Antonio, Chile.	Havre, France.	Nitrates, copper.	6,816	5,904	4,374
Buenaventura.	26	6.00	26	8.37	26	20.05	27	1.15	American.	Panama R. S. S. Line	455.7	56.2				Guayaquil, Ecuador.	New York, N. Y.	General.	1,015	2,873	1,776
Neches ¹ .	26	6.15	26	9.08	26	20.55	28	2.05	American.	U. S. Navy.	445.7	60.6	23.5			Balboa, C. Z.	Cristobal, C. Z.				
Kmai Maru ¹¹ .	26	6.15	26	10.08	26	21.55	27	1.45	Japanese.	Osaka Shosen Kaisha.	445.0	60.6	23.5			Shanghai, China.	Baltimore, Md.		3,663	8,982	6,272
Willaro.	26	9.15	26	10.50	26	22.45				Williams S. S. Co.	386.8	52.2	24.0			Harley, Wash.	Baltimore, Md.	Lumber, general.	6,300	5,684	4,070

¹¹ Tanker.¹² Motor ship.¹³ Mine planter.¹⁴ Destroyer.¹⁵ Tug.¹⁶ Wheat, barley, lumber, and general.¹⁷ Coffee, wood, hides, and bullion.

Barat.	28	1.13	26	12	24	26	20	00	3	6.05	Dutch.	Royal Neth. S. S. Co.	202	9	22	Buenaventura, Col.	Cristobal, C. Z.	155	1,182	743
Chetopa	26	9.36	26	17	03	27	1.50	27	1.50	American.	Charlts Nelson & Co.	224	0	34	Seattle, Wash.	New York, N. Y.	4,333	3,984	2,023	
Chilore.	27	1.00	27	6.04	27	18.25	27	18.25	27	18.25	American.	Ore S. S. Corp.	249	6	22	Cruz Grande, Chile	New York, N. Y.	21,000	14,538	4,480
Subotawan.	26	23.55	27	6.46	27	18.50	27	18.50	27	18.50	American.	Swayne & Hoyt.	356	8	52	Seattle, Wash.	New Orleans, La.	2,931	5,708	4,138
Gen. Wm. M.											U. S. Army.		100	2	32	Balboa, C. Z.	Oristobal, C. Z.			
Graham	26	23.30	27	6.55	27	18.50	27	18.50	27	18.50	American.	Am.-Hawaiian Line	434	3	37	Seattle, Wash.	Piston, Mass.	6,441	7,932	5,912
Georgian	26	23.30	27	6.55	27	19.45	27	19.45	27	19.45	American.	Roland Line	216	5	32	Gusaynqui, Beaudr	Cristobal, C. Z.	144	1,183	1,141
Mandales	27	6.00	27	8.31	27	21.00	27	21.00	27	6.05	German.	Strange & Co.	389	0	53	Vancouver, B. C.	New York, N. Y.	7,200	6,104	4,460
Norwalk	27	7.15	27	9.37	27	21.00	27	21.00	27	21.00	Danish.	French Line.	437	4	55	Vancouver, B. C.	Le Havre, France.	7,075	7,090	4,929
Arizona	27	8.10	27	10.16	27	22.00	28	14.00	28	22.45	French.	Sun Oil Co.	480	6	66	Los Angeles, Calif.	Philadelphia, Pa.	12,983	9,607	6,551
Eastern Sun	27	11.35	27	12.22	27	22.45	27	22.45	27	22.45	American.	Hamburg-American Line	451	3	59	Vancouver, B. C.	Hamburg, Germany	6,270	5,100	6,387
Oakland	27	11.45	27	13.15	28	1.10	28	1.10	28	1.10	German.	U. S. Navy.	423	0	55	Balboa, C. Z.	Cristobal, C. Z.	7,014	5,105	3,515
Bridge	27	14.20	28	1.10	28	1.10	28	1.10	28	1.10	American.	U. S. Navy.	423	0	55	Balboa, C. Z.	Cristobal, C. Z.	7,014	5,105	3,515
Langford.	27	16.30	27	17.20	28	8.40	28	8.40	28	15.20	British.	Louis Dreyfus Co.	370	0	56	Vancouver, B. C.	Falmouth, Eng.	9,163	7,773	5,634
Pat Doleeny	28	2.13	28	5.36	28	15.20	28	15.20	28	15.20	American.	Riefield Oil Co., Calif.	430	0	59	Los Angeles, Calif.	Baltimore, Md.	7,103	7,773	5,634
Nelson	28	2.13	28	5.36	28	15.20	28	15.20	28	15.20	American.	British Navy.	702	0	106	Balboa, C. Z.	Cristobal, C. Z.	7,103	7,773	5,634
Canadian	27	21.10	28	7.51	28	17.45	28	23.10	28	23.10	British.	Can. Natl. Steamships.	430	0	56	Auckland, N. Z.	Halifax, N. S.	760	7,680	5,518
Cruiser.	27	21.10	28	7.51	28	17.45	28	23.10	28	23.10	British.	Can. Natl. Steamships.	430	0	56	Auckland, N. Z.	Halifax, N. S.	760	7,680	5,518
Childar	27	23.16	28	9.09	28	18.20	28	20.15	28	20.15	Norwegian.	Gen. S. S. Corp.	377	6	53	Los Angeles, Calif.	Rotterdam, Holland	7,003	6,076	4,373
Atland	27	23.30	28	9.43	28	18.50	28	20.50	28	20.50	Swedish.	Axel Brostrom & Son	388	8	52	Tocopilla, Chile.	Azores	7,200	5,631	3,343
Chile Maru.	28	3.40	28	10.29	28	19.30	28	20.45	28	20.45	Japanese.	Wessel, Duval & Co.	385	0	51	Iquique, Chile.	Nitrate of soda.	7,938	5,923	4,409
Lena	28	4.15	28	10.59	28	19.50	28	19.30	28	19.30	American.	Lukenbach Line.	425	0	53	Seattle, Wash.	Mobile, Ala.	4,071	7,217	5,295
Washington	28	8.25	28	11.12	28	21.10	28	21.10	28	21.10	American.	The Texas Co.	425	8	57	Los Angeles, Calif.	Baltimore, Md.	8,837	7,484	4,216
Pacific Cedar.	28	8.45	28	12.00	28	21.15	1	00.25	28	21.15	American.	Dixon S. S. Corp.	369	4	54	Seattle, Wash.	Norfolk, Va.	7,949	6,138	4,353
San Angelo	28	11.10	28	13.27	28	22.10	28	22.10	28	22.10	American.	Pacific Atlantic S. S. Co.	409	5	58	Portland, Ore.	Wilmington, Del.	6,155	6,510	4,827
California	28	11.10	28	13.27	28	22.10	28	22.10	28	22.10	American.	Pacific Atlantic S. S. Co.	409	5	58	Portland, Ore.	Wilmington, Del.	6,155	6,510	4,827
California	28	13.30	28	15.14	28	23.30	28	23.30	28	23.30	American.	The Texas Co.	409	9	64	Los Angeles, Calif.	Port Arthur, Tex.	16,239	10,853	8,271
Fernhill	28	18.00	28	18.46	1	2.10	1	2.10	1	2.10	Norwegian.	Fern Line.	377	0	54	Loilo, P. I.	New York, N. Y.	7,000	6,081	4,538
Induna.	28	18.30	28	19.30	1	3.47	1	3.47	1	3.47	British.	DuPont & Co.	402	0	52	Tocopilla, Chile.	East coast, U. S. A.	7,710	5,634	4,172

<

...and the ...

20 Battleship.

1 Tanker, 19 Supply sh

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	To—
February 22	Bolivar	Colombian S. S. Line	New York via wayports.	February 22	No. 6109-M ²⁸	Pan American Airways	Miami via wayports.
February 22	Calamara	United Fruit Co.	Port Limon, Costa Rica.	February 22	Quinoro	Hamburg-American Line	Hamburg via wayports.
February 22	Republic	United States Lines	Philadelphia and waypts.	February 22	Calamara	United Fruit Co.	New York via Habana.
February 23	Anachucuna ²⁷	United Fruit Co.	Colon, Rep. of Panama.	February 22	Caledonia	Anchor Line	New York via wayports.
February 23	Berlin	North German Lloyd	New York via wayports.	February 22	Bolivar	Colombian S. S. Line	New York via Kingston.
February 23	Holland-America Line	Holland-America Line	New Orleans, La.	February 23	Anachucuna ²⁷	United Fruit Co.	Colon, Rep. of Panama.
February 23	Heredia	United Fruit Co.	New Orleans, La.	February 23	Republic	United States Lines	Philadelphia and waypts.
February 23	Scadts Airplane Co.	Scadts Airplane Co.	Barranquilla and waypts.	February 24	Pearl Marie ²⁹	G. I. Bryan	Bluefields, Nicaragua.
February 24	Vulcania	Cosulich Line	New York via wayports.	February 24	Bolivar	North German Lloyd	New York via wayports.
February 24	Cryssen	Royal Netherlands S. S. Co.	Hamburg via wayports.	February 24	Volendam	Holland-America Line	New York via wayports.

²⁷ Motor boat. ²⁸ A. R. mail boat. ²⁹ Motor schooner.

* Other than ships passing through the Canal.

Other than ships passing through the Canal.

rior
29 Motor schooners

28 A

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					
* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	From—	Date.	Vessel.	To—
February 24...	No. 945-M ³⁰ ...	Pan American-Grace Airways...	February 24...	Heredia...	New Orleans and waypts.
February 24...	Sialia ³¹ ...	A. M. Andrews Investment Co.	February 25...	Vulcania...	New York via wayports.
February 25...	Ancon...	Panama R. S. S. Line...	February 25...	No. 9664 ³⁰ ...	San Salvador and waypts.
February 25...	Arguani...	Elders & Fyffes, Ltd.	February 25...	No. 670-M ³⁰ ...	Miami via wayports.
February 25...	Tolosa...	United Fruit Co.	February 25...	Crynssen...	Port Limon, Costa Rica.
February 25...	Santa Marta...	United Fruit Co.	February 25...	Arguani...	Avonmouth via wayports.
February 25...	Tela...	Aluminum Line...	February 25...	Agnete Maersk...	New Orleans and waypts.
February 25...	No. 669-M ³⁰ ...	Pan American Airways...	February 26...	Tela...	Bocas, Rep. of Panama.
February 25...	No. 9685 ³⁰ ...	Leyland S. S. Line...	February 26...	No. 144-M ³⁰ ...	Colombian ports.
February 27...	Darien...	Colombian S. S. Line...	February 26...	Santa Marta...	Port Limon, Costa Rica.
February 27...	Camden...	United Fruit Co.	February 27...	Tolon...	Barranquilla and waypts.
February 27...	Duchess of Bedford...	Canadian-Pacific Steamship Co.	February 27...	Darien C-35 ³⁰ ...	Colon, Rep. of Panama.
February 27...	Cefalu...	Standard Fruit & S. S. Co.	February 28...	Annetta I. ³² ...	Colon, Rep. of Panama.
February 28...	Crynssen...	Royal Netherlands S. S. Co.	February 28...	Carmelita ³³ ...	Colon, Rep. of Panama.
February 28...	No. 309-N ³⁰ ...	Pan American Airways...	February 28...	Tela...	New Orleans and waypts.
February 28...	No. 668-M ³⁰ ...	Pan American Airways...	February 28...	Cefalu...	New Orleans and waypts.
February 28...	No. 9664 ³⁰ ...	Pan American Airways...	February 28...	Duchess of Bedford...	New York via wayports.
February 28...	No. 144-M ³⁰ ...	Pan American-Grace Airways...	February 28...	Crynssen...	Amsterdam and wayports.
February 28...	Parissima...	United Fruit Co.	February 28...	Baracao...	New York via Kingston.
February 28...	Annetta I. ³² ...	A. Tagaropulos...			
February 28...	Carmelita ³³ ...	A. N. Bryan...			
³⁰ Air mail carrier. ³¹ Yacht. ³² Motor boat. ³³ Motor schooner.			PORT OF BALBOA.		
February 22...	Sveadrøtt ³⁴ ...	Knutson Line...	February 24...	Sveadrøtt ³⁴ ...	Antofagasta, Chile.
February 28...	Real ³⁵ ...	Hans Elliot...	February 26...	Real ³⁵ ...	Talara, Peru.
February 28...	Montebello...	Union Oil Co., Calif.	February 28...	Montebello...	Panama Bay, R. P.
			March 2...		Los Angeles, Calif.
³⁴ Tanker. ³⁵ Motor ship.			* Other than ships passing through the Canal.		

Census of the Canal Zone.

A compilation of census data covering the Canal Zone population as of April 1, 1930, classified by age, sex, color, and nativity, was released for publication by the Bureau of the Census on February 21, 1931. In connection with a detailed tabulation contained in the report, the announcement stated:

The total population of the Canal Zone on April 1, 1930, was 39,467, comprising 2,694 persons under 5 years of age; 3,618 from 5 to 9 years; 3,510 from 10 to 14 years; 3,705 from 15 to 19 years; 5,952 from 20 to 24 years; 4,149 from 25 to 29 years; 3,290 from 30 to 34 years; 6,932 from 35 to 44 years; 3,974 from 45 to 54 years; 1,153 from 55 to 64 years; 341 from 65 to 74 years; 104, 75 years and over, and 45 for whom age was not reported.

Of the total population of the Canal Zone, 24.9 per cent are under 15 years of age; 24.5 per cent are from 15 to 24 years of age; 36.4 per cent are from 25 to 44 years of age; 13.0 per cent are from 45 to 64 years of age; and 1.2 per cent are 65 years of age and over.

The number of persons under 1 year of age decreased from 540 in 1920 to 496 in 1930. The entire group of children under 5 years of age shows an increase from 2,590 in 1920 to 2,694 in 1930. All of the remaining age groups, exclusive of the unknown age group, show a marked increase between 1920 and 1930.

On the percentage basis, persons under 30 years of age represented the larger proportion of the total population both in 1920 and 1930, though the per cent of the total for this group for 1930 is smaller than it was in 1920. The age group, 35 to 44, recorded a larger proportion of the population in 1930 and in 1920 than did any other of the age groups.

In THE PANAMA CANAL RECORD of November 5, 1930, were published certain figures concerning the census of 1930, based on a compilation made on the Isthmus primarily to meet an immediate need for information for school and health work. Due to the necessity of forwarding the enumeration sheets to Washington without further delay it was not practicable to check the compilation thoroughly, and the reports of the Bureau of the Census indicate that corrections should be made. The total population is reported by the Bureau as 39,467, or two less than the 39,469 originally reported on the Isthmus. This was due to reporting the population of Pedro Miguel as 821, when the final check showed it as 819. The totals for the other 46 enumeration areas were correct. In the combined classification by color, however, the white population should be shown as 18,814 instead of 18,783; the total of all others as 20,653 instead of 20,686; and in the classification by sex the total males should be 26,139 instead of 26,155, the total females 13,328 instead of 13,314.

Battleship "Nelson" Leaves Canal Zone.

The battleship *Nelson*, of the Royal British Navy, flagship of the Commander-in-Chief, British Atlantic Fleet, which arrived at Balboa on February 23 to pay a formal call on the United States Fleet now visiting Balboa, returned through the Canal to Cristobal on February 28, and cleared for Portsmouth, England, via Barbados and Gibraltar, on the afternoon of the same day. The displacement of the vessel on her return voyage through the Canal was 36,494 tons, resulting in a tolls' revenue of \$18,247, or \$73 less than the \$18,320 paid on her first transit; the decrease was due to smaller displacement tonnage, occasioned by less fuel aboard.

During the vessel's visit to Balboa, many official functions were held in honor of the Commander-in-Chief of the British Atlantic Fleet, Admiral Sir Michael Hodges, and his officers. The visit was concluded with a reception by Admiral Hodges aboard the *Nelson*.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending February 21, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Cartago.....	United Fruit Co.....	February 15.....	February 15.....		14
Kwanto Maru.....	Osaka Shosen Kaisha.....	February 15.....	February 15.....		27
Ulua.....	United Fruit Co.....	February 15.....	February 15.....	39	631
Loreto.....	Pacific Steam Navigation Co.....	February 15.....	February 16.....	37	31
Heilo.....	Panama Mail S. S. Co.....	February 15.....	February 17.....	1,008	(²) 31
Cauca.....	National Navigation Co.....	February 15.....	February 19.....	301	226
Cristobal.....	Panama R. R. S. S. Line.....	February 15.....	February 16.....		847
Alvarado.....	Pacific Steam Navigation Co.....	February 16.....	February 16.....	127	14
Ammon.....	Hamburg-American Line.....	February 16.....	February 16.....	72	16
Villanger.....	Westfal, Larsen & Co.....	February 16.....	February 16.....	(¹)	15
Carl Legien.....	Hamburg-American Line.....	February 16.....	February 17.....	5	27
Santa Maria.....	Grace Line.....	February 16.....	February 17.....	134	113
Cuba.....	French Line.....	February 16.....	February 18.....	51	534
Sixaoa.....	United Fruit Co.....	February 16.....	February 18.....	378	804
Magallanes.....	Spanish S. S. Line.....	February 16.....	February 20.....	215	466
Este.....	North German Lloyd.....	February 17.....	February 17.....	9	618
Orinoco.....	Hamburg-American Line.....	February 17.....	February 17.....	134	(²) 24
Tongking.....	Danish East Asiatic Line.....	February 17.....	February 17.....	(¹)	35
Chile.....	Danish East Asiatic Line.....	February 17.....	February 18.....	35	399
Baarn.....	Royal Netherlands S. S. Co.....	February 17.....	February 18.....	79	144½
San Mateo.....	United Fruit Co.....	February 17.....	February 21.....	1,384	(²) 332
Salvador.....	Pacific Steam Navigation Co.....	February 17.....	February 18.....		6
Aconagua.....	Chilean Line.....	February 18.....	February 18.....	684	(²)
Iriona.....	United Fruit Co.....	February 18.....	February 18.....	85	(²)
San Anselmo.....	Quaker S. S. Line.....	February 18.....	February 18.....	400	50½
Calamares.....	United Fruit Co.....	February 18.....	February 19.....	28	81
Orbita.....	Pacific Steam Navigation Co.....	February 18.....	February 19.....	180	368
Bennekom.....	Royal Netherlands S. S. Co.....	February 18.....	February 19.....	(²)	81
Dinteldijk.....	Holland-American Line.....	February 18.....	February 19.....	628	301
Zacapa.....	United Fruit Co.....	February 18.....	February 19.....	(¹)	6
Agafa.....	L. Ducret.....	February 19.....	February 19.....	596	141
Cerigo.....	Hamburg-American Line.....	February 20.....	February 20.....	49	275
Santa Clara.....	Grace Line.....	February 20.....	February 21.....	107	405
Portland.....	Hamburg-American Line.....	February 20.....	February 21.....	141	211
Atlantida.....	Standard Fruit & S. S. Co.....	February 20.....	February 21.....	15	34
Santa Elisa.....	Grace Line.....	February 21.....	February 21.....	79	258
Cali.....	North German Lloyd.....	February 21.....	February 21.....	218	(²)
Iriona.....	United Fruit Co.....	February 21.....	February 21.....	12	(²)
Tatsuno Maru.....	Nippon Yusen Kaisha.....	February 21.....	February 21.....		
Reorder.....	T. & J. Harrison.....	February 21.....	February 21.....		
Niel Maersk.....	A. P. Moller.....	February 21.....	February 21.....		

¹ No cargo discharged.² No cargo laded.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Two Weeks Ending February 28, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Nosa King.....	N. O. & S. A. S. S. Co.....	February 15.....	February 15.....	35	4
Kenowis.....	U. S. Government.....	February 16.....	February 18.....	2,007	1
Loreto.....	Pacific Steam Navigation Co.....	February 16.....	February 16.....		2
Santa Maria.....	Grace Line.....	February 16.....	February 16.....	1	39
San Mateo.....	United Fruit Co.....	February 16.....	February 17.....	194	1,775
Canadian Constructor.....	Canadian National Steamships.....	February 14.....	February 16.....		36
Baarn.....	Royal Netherlands S. S. Co.....	February 18.....	February 18.....	113	163
Frost.....	West India Oil Co.....	February 19.....	February 26.....		79
California.....	Panama-Pacific Line.....	February 20.....	February 20.....	17	175
Tatsuno Maru.....	Nippon Yusen Kaisha.....	February 20.....	February 21.....	207	2
Port Fairy.....	Commonwealth & Dominion Line.....	February 20.....	February 20.....		210
Santa Clara.....	Grace Line.....	February 20.....	February 20.....	1,010	29
San Mateo.....	United Fruit Co.....	February 21.....	February 21.....	7	196
Tai Shan.....	Barber Line.....	February 22.....	February 22.....	12	18
Sveadrott.....	Knutson Line.....	February 22.....	February 22.....	191	
Suriname.....	United Fruit Co.....	February 23.....	February 24.....	160	14
Prince Albert.....	Atlantic-Pacific Navigation Co.....	February 24.....	February 26.....	11	25
Cambrai.....	U. S. Government.....	February 24.....	February 24.....	8	
Emil Kirdorf.....	Hamburg-American Line.....	February 24.....	February 24.....	231	365
San Simeon.....	Pacific-Atlantic S. S. Co.....	February 24.....	February 24.....		
Venezuela.....	Panama Mail S. S. Co.....	February 25.....	February 25.....		
El Salvador.....	Panama Mail S. S. Co.....	February 25.....	February 26.....		
Acajutla.....	Pacific Steam Navigation Co.....	February 25.....	February 25.....		
Chetopa.....	Charles Nelson & Co.....	February 26.....	February 26.....		
Willboro.....	Williams S. S. Corp.....	February 27.....	February 27.....		

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Volume XXIV. Balboa Heights, C. Z., March 11, 1931. No. 32.

Secretary of Navy Arrives at Balboa to View Maneuvers of Fleet.

The cruiser *Chester* of the United States Navy arrived at Cristobal on Monday morning, March 9, with the Secretary of the Navy, The Honorable Charles Francis Adams, aboard. The *Chester*, which is one of the Navy's new 10,000-ton cruisers, left Hampton Roads late Friday morning, March 6, and made the voyage in approximately 66 hours—or at an average speed of more than 26 knots—which is believed to be a record run between these two ports. The vessel transited the Canal to Balboa on the first schedule on the day of arrival and proceeded to the outer anchorage where the Secretary of the Navy boarded the U. S. S. *Texas*, flagship of the United States Fleet. Immediately after boarding the *Texas*, the vessel proceeded to join the fleet beyond Panama Bay, where the Secretary will view the remainder of the maneuvers.

Comparison of Canal Traffic in February, 1931, with February Traffic in Previous Years.

Commercial traffic through the Canal during the month of February, 1931, was the lowest February traffic since 1926, when 426 vessels were passed through the Canal. In comparison with February, 1930, traffic for the past month declined 60 transits (12.2 per cent); 234,389 net tons (9.9 per cent); and 447,681 cargo tons (18.8 per cent). In comparison with February, 1929, there was a decrease of 91 transits (17.4 per cent); 293,664 net tons (12.1 per cent); and 620,279 cargo tons (24.3 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of February each year from 1915 to 1931, inclusive, and for comparison, the monthly averages for the corresponding fiscal year ending on June 30, following:

Calendar year.	Month of February.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	* 91	317,397	423,597	1915.....	* 102	361,197	465,567
1916.....	4	694	.....	1916.....	63	199,687	257,843
1917.....	134	462,957	547,436	1917.....	150	483,213	588,213
1918.....	155	487,162	473,368	1918.....	172	547,839	627,669
1919.....	155	512,078	563,357	1919.....	169	510,416	576,385
1920.....	208	703,462	780,488	1920.....	206	712,170	781,208
1921.....	241	916,838	952,904	1921.....	241	951,323	966,601
1922.....	212	886,535	838,074	1922.....	228	951,455	907,075
1923.....	326	1,529,547	1,563,278	1923.....	331	1,550,482	1,630,656
1924.....	418	2,108,879	2,243,616	1924.....	436	2,179,073	2,249,559
1925.....	379	1,789,447	1,539,619	1925.....	389	1,904,596	1,996,570
1926.....	424	1,991,127	2,139,207	1926.....	433	2,064,649	2,169,787
1927.....	449	2,201,328	2,230,107	1927.....	456	2,185,651	2,312,351
1928.....	547	2,460,111	2,660,425	1928.....	538	2,454,886	2,469,226
1929.....	522	2,428,530	2,550,498	1929.....	534	2,468,483	2,555,250
1930.....	491	2,369,255	2,377,900	1930.....	515	2,498,385	2,502,519
1931.....	431	2,134,866	1,930,219	1931.....	* 476	2,350,488	2,183,969

* Canal opened August 15, 1914.

* Average for 10½ months.

* Average for 8 months of fiscal year.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 7, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)		Length.	Beam, water draft.		Salt water draft.	From—	To—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.		Nature.	Tons.		Gross.	Net.							
Royal Arrow.	28	20 30	1	2 05	1	10 55	1	12 10	American.	Standard Transp. Co.	467.6	62.7	21.0	New York, N. Y.	Ballast.	Los Angeles, Calif.	9,699	6,357			
Manizales.	27	21 08	1	6 05	1	13 28	1	14 50	German.	Roland Line.	216.5	32.9	12.5	Cristobal, C. Z.	General.	Guayaquil, Ecuador	252	1,132			
Sun.	1	00 40	1	7 25	1	14 28	1	16 00	American.	Sun Oil Co.	480.6	66.0	22.0	Baltimore, Md.	Ballast.	Los Angeles, Calif.	9,620	6,476			
Japanese Prince.	1	2 10	1	7 25	1	14 40	1	16 00	British.	Furness, Withy & Co.	441.0	60.1	20.0	New York, N. Y.	General.	Manila, P. I.	2,603	9,240			
Solana.	1	7 25	1	7 40	1	15 24	1	16 30	American.	Tidewater Oil Co.	419.5	56.5	22.0	New York, N. Y.	Ballast.	San Francisco, Cal.	7,060	6,152			
Gymette.	27	1 25	1	9 10	1	16 11	1	17 05	British.	Anglo-Saxon Pet. Co.	420.3	54.6	16.7	Curacao, D. W. I.	Ballast.	Los Angeles, Calif.	6,501	4,459			
Queen Maud.	1	10 45	1	10 55	1	17 46	1	19 00	British.	Dupont de Nemours.	400.0	52.3	18.0	Baltimore, Md.	General.	Talcahuano, Chile.	1,844	5,748			
Flow City.	1	14 40	1	15 00	2	10 04	2	13 14	American.	Nelson Line.	324.0	46.0	23.0	Freeport, Tex.	Subph.	San Francisco, Cal.	4,990	3,983			
Abana.	1	16 20	1	18 50	2	10 10	2	14 10	American.	North German Lloyd.	295.0	46.0	16.0	Hamburg, Germany	General.	Champerico, Gust.	1,421	3,038			
Sveajarl.	1	18 10	2	2 20	2	11 54	2	17 00	Swedish.	K. Knutson	378.0	51.3	22.7	Oslo, Norway	General.	Corral, Chile.	5,580	5,448			
Robin Gray.	2	2 35	2	4 00	2	12 50	2	14 05	American.	Isthmian S. S. Lines	424.8	55.2	24.3	Baltimore, Md.	General, cattle.	Seattle, Wash.	5,580	5,448			
Topeka.	2	1 45	2	5 15	2	13 06	2	14 10	Norwegian.	Canadian Transp. Co.	366.3	51.2	16.6	Turks Island.	General, steel.	Seattle, Wash.	7,021	7,472			
Marbrion.	2	5 50	2	6 25	2	14 45	2	20 30	British.	R. Chapman & Son.	412.6	55.2	16.0	Tyne, England.	Salt.	Vancouver, B. C.	264	5,441			
Seota.	2	9 00	2	9 00	2	18 17	3	11 30	American.	U. S. Navy	149.3	59.0	17.6	Cristobal, C. Z.	Ballast.	Vancouver, B. C.	6,823	4,797			
Los Angeles.	2	14 25	2	20 45	3	10 26	3	11 30	German.	Hamburg-American Line	432.0	59.0	17.6	Hamburg, Germany	Towing house b't.	Baiboa, C. Z.	2,972	8,454			
Canadian Miller.	3	3 05	3	3 35	3	11 10	3	12 25	British.	Can. Nat. Steamships.	400.0	52.0	19.0	St. John, N. B.	General.	Vancouver, B. C.	2,710	5,892			
Barat.	26	20 00	3	6 05	3	14 33	3	15 30	Dutch.	Royal Neth. S. S. Co.	200.0	33.0	11.2	Cristobal, C. Z.	General.	Guayaquil, Ecuador	76	1,183			
Fulton.	2	10 35	3	6 15	3	14 23	4	10 26	American.	U. S. Navy	216.0	35.0	19.5	High seas.	Ballast.	Baiboa, C. Z.	3,012	7,098			
Panama.	3	17 35	3	23 20	4	9 17	4	11 48	American.	Amer-Hawaiian Line.	407.7	53.7	19.5	Boston, Mass.	General.	Seattle, Wash.	3,049	7,027			
Panama.	3	12 38	4	1 20	4	10 13	4	11 48	Danish.	East Asiatic Co.	410.0	55.0	18.3	Copenhagen, Den.	Coke, gen., iron.	San Francisco, Cal.	3,012	7,027			
Voce.	3	21 30	4	2 35	4	11 21	4	12 30	British.	Vacuum Oil Co.	400.0	62.8	22.2	Wilhelmsn, Ger.	Ballast.	San Francisco, Cal.	3,049	7,027			
West Cactus.	3	23 15	4	4 20	4	14 18	4	15 25	American.	McCormick S. S. Co.	410.2	54.0	17.6	Rosario, Argentina.	General.	Vancouver, B. C.	3,080	6,625			
Hartford.	4	5 50	4	6 55	4	15 52	4	20 20	British.	Federal Steam Nav. Co.	520.0	64.0	28.0	Newport, England.	General.	N. Plymouth, N. Z.	7,970	12,933			
Susan V.	3	23 45	4	7 45	4	16 50	4	17 45	American.	Lukenbach Line.	434.3	57.7	18.0	Boston, Mass.	General.	Seattle, Wash.	3,100	7,947			
Perdida.	4	4 05	4	8 40	4	17 48	4	18 50	British.	Aberdeen, Comth Line	500.0	60.3	22.0	London, England.	General.	Cairns, Australia	3,439	11,811			
Acajula.	26	2 30	4	9 25	4	17 27	4	18 50	British.	Pacific Steam Nav. Co.	215.7	34.0	14.8	Cristobal, C. Z.	General.	Champerico, Gust.	500	1,273			
San Rafael.	4	9 40	4	14 15	4	22 05	4	23 10	American.	States S. S. Co.	410.0	54.0	17.0	Philadelphia, Pa.	General.	Seattle, Wash.	3,476	6,484			
San Rafael.	3	17 20	5	00 20	5	9 20	6	1 43	American.	N. O. & S. A. S. Co.	300.0	45.0	18.4	New Orleans, La.	General.	Talcahuano, Chile.	2,140	3,256			
Honiku Maru.	3	20 40	5	20 40	5	11 15	5	18 15	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	21.3	New York, N. Y.	General.	Yokohama, Japan.	4,970	6,212			
Intrepid.	3	19 40	5	6 15	5	13 11	5	13 11	American.	Transport. Prod. Co.	167.0	33.8	17.0	N. London, Conn.	Ballast.	San Diego, Calif.	2,307	10,626			
Santa Maria.	5	16 30	6	2 10	6	8 54	6	13 35	American.	Grace Line.	466.0	64.0	23.8	New York, N. Y.	General.	Talcahuano, Chile.	2,307	10,626			
Western Sun.	5	17 35	6	6 10	6	11 16	6	14 05	American.	Sun Oil Co.	480.6	66.0	21.0	New York, N. Y.	Ballast.	Los Angeles, Calif.	9,607	6,351			
Steelmaker.	5	18 30	6	5 00	6	12 53	6	14 05	American.	Isthmian S. S. Lines	395.5	55.0	27.0	Mobile, Ala.	Steel, general.	Los Angeles, Calif.	8,396	7,530			
Adams.	6	5 35	6	6 25	6	13 37	6	22 35	American.	Dollar Line.	502.0	62.2	27.0	New York, N. Y.	General.	Round the world.	3,466	12,512			
Tanker.									Sub-tender.	s Yacht.										9,178	

* Tanker.

* Motor ship.

* Tug.

* Sub-tender.

* Yacht.

Virginia	6	5.25	6	7.20	6	14.52	7	3.40	American	Panama-Pacific Line	586.4	80.3	27.4	New York, N. Y.	San Francisco, Calif.	Autos, beans, etc.	3,090.25	254	18,170
Atlantic Suez	6	8.40	6	8.50	6	16.40	6	18.15	American	Sun Oil Co.	429.3	59.2	18.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,568	5,283	
Namenville	6	13.35	6	15.35	6	22.10	6	23.12	Norwegian	A. F. Klaveness	432.0	59.7	18.0	New York, N. Y.	Vancouver, B. C.	Ballast	8,627	6,304	
Sciota	5	13.25	6	9.15	6	16.29			American	U. S. Navy	149.3	30.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
St. Jernberg	6	18.30	7	1.20	7	8.50	7	10.55	Danish	Strauge & Co.	380.0	53.9	15.0	Boston, Mass.	Vancouver, B. C.	Ballast	4,631	2,691	
La Perla	3	3.50	7	5.25	7	13.25	8	3.09	American	United Fruit Co.	325.2	48.1	18.3	Cristobal, C. Z.	San Francisco, Calif.	Ballast	6,023	2,261	
S-11	7	6.30	7	6.15	7	13.33			American	U. S. Navy	231.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast	5,536	10,041	7,271
Port Hobart	7	6.45	7	6.45	7	14.40	7	21.08	British	Com'th & Dom. Line	467.0	60.0	24.6	London, England	Dunedin, N. Z.	General	2,859	4,723	
Hoyanger	6	4.10	7	7.45	7	17.18	7	16.20	Norwegian	Intercean S. S. Corp.	302.4	54.0	12.0	Havre, France	Los Angeles, Calif.	General	427	2,851	1,776
Arona	6	21.30	7	10.10	7	15.28	7	18.20	British	Pacific Steam Nav. Co.	383.0	43.0	15.0	New York, N. Y.	Callao, Peru	General	1,702	7,790	6,010
Collina	6	23.20	7	13.35	7	22.55	7	23.10	Italian	Nav. Libera-Trestina	430.0	53.0	16.10	Trieste, Italy	Vancouver, B. C.	Steel rails, sugar	3,929	3,333	2,207
Lydia	7	12.30	7	14.25	7	20.15	7	23.19	British	Canadian Transp. Co.	300.0	44.0	22.0	Halifax, N. S.	Seattle, Wash.	General	2,627	7,253	5,012
Kongsberg	7	6.40	7	15.05	7	23.12	8	4.10	German	North German Lloyd	431.0	56.3	17.9	Bremen, Germany	Valparaiso, Chile	Ballast			
Sandpiper	7	6.45	7	13.40	7	23.40			American	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Motor Sailor	7		7	16.00					American	U. S. Navy				Cristobal, C. Z.	Gatun, C. Z.	Ballast			

* Tanker.

* Submarine.

* Mine sweeper.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Betterton	28	30.00	1	5.50	1	14.15	1	14.15	American	Cities Service Oil Co.	431.0	59.2	25.3	Ventura, Calif.	Boston, Mass.	Gasoline	8,821	7,863	5,104
Melpomene	28	22.20	1	7.12	1	15.20	1	15.20	French	Demarais Freres	425.8	56.9	26.0	Los Angeles, Calif.	Blaye, France	Gasoline	8,947	7,085	5,050
Glafgow Maru	1	3.30	1	8.12	1	16.25	1	17.10	Japanese	Kokusa Kisen Kaisha	385.0	51.0	26.5	Puget Sound, P. I.	New York, N. Y.	Sugar	7,500	6,213	4,665
Morgensen	1	8.35	1	9.48	1	17.40	1	17.40	Norwegian	Pet. Stor. & Fm. Corp.	442.7	58.8	26.3	Los Angeles, Calif.	Lands End, Eng.	Gasoline	10,053	7,559	5,044
Sciota	1	8.39	1	8.39	1	16.10	2	9.00	American	U. S. Navy	155.0	30.0		Balboa, C. Z.	Cristobal, C. Z.	Towing barge			
Brazos	2	6.14	2	6.14	2	13.35	3	10.05	American	U. S. Navy	475.0	56.0		Balboa, C. Z.	Cristobal, C. Z.		4,700	4,421	3,063
Condor	2	3.55	2	6.54	2	14.45	2	16.10	Chilean	Anglo-Chilean Nitrate	356.4	45.3	25.0	Valparaiso, Chile	New York, N. Y.	Nitrates	9,113	7,469	5,020
Iowa	2	4.15	2	7.28	2	16.35	3	10.25	French	French Line	448.9	53.3	26.5	Corral, Chile	Le Havre, France	Nitrates	4,584	3,983	2,970
Nosa Prince	2	6.40	2	8.33	2	17.45	2	19.25	American	N. O. & S. S. S. Co.	324.0	46.2	24.0	Talcahuano, Chile	New Orleans, La.	Nitrates, beans			
Ville de Verdun	2	3.40	2	9.57	2	19.05	3	00.10	French	French Line	409.3	53.5	26.0	Noumea, N. Calid.	Dunkirk, France	General	4,857	7,603	5,629
Braden	2	12.00	2	13.40	2	22.00	3	22.00	British	Reardon Smith Line	415.0	54.2	25.0	Vancouver, B. C.	Cardiff, Wales	General	7,604	6,979	5,387
Santa Barbara	2	10.30	2	13.20	2	21.25	3	00.45	American	Grace Line	466.0	64.0	25.0	Talcahuano, Chile	New York, N. Y.	General	5,108	4,687	5,633
Cauca	2	6.40	2	15.38	3	00.50			Colombian	National Navigation Co.	107.0	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	Sugar	278	262	161
Kafuku Maru	2	17.00	2	18.25	3	2.15	3	3.15	Japanese	Kokusa Kisen Kaisha	385.0	51.0	26.0	Baia, P. I.	New Orleans, La.	Sugar	7,500	6,209	4,763
La Perla	2	13.15	2	19.50	3	3.50			American	United Fruit Co.	325.2	48.1	22.0	San Francisco, Calif.	Cristobal, C. Z.	General	1,225	4,033	2,261
Pennsylvania	2	9.30	3	6.21	3	14.05	3	14.44	American	Panama-Pacific Line	586.4	80.3	30.0	San Francisco, Calif.	New York, N. Y.	General	8,175	25,262	18,194
St. Mihel	3	6.34	3	6.34	3	14.45	4	1.10	American	U. S. Army	448.0	58.0	25.3	Los Angeles, Calif.	Brooklyn, N. Y.	Crude oil	13,300	10,550	7,888
Baltic	3	7.08	3	7.08	3	15.10	3	16.10	Danzig	Standard Shipping Co.	509.5	64.1	29.0	Lobitos, Peru	Halifax, N. S.	General	9,574	9,258	6,944
Mexican	2	23.15	3	7.58	3	17.00	3	17.00	American	Amer-Hawaiian Line	472.3	57.2	27.4	Portland, Oreg.	Boston, Mass.	Nitrates, general	8,518		
Goslar	2	23.15	3	8.42	3	18.20	4	00.40	German	North German Lloyd	449.4	57.5	25.0	Valparaiso, Chile	Bremen, Germany	General	6,750	7,963	5,837
Laurits	3	2.10	3	9.35	3	19.07	4	14.10	Norwegian	Fred Olsen & Co.	435.9	56.2	25.0	Vancouver, B. C.	Oslo, Norway	General	8,941	9,027	6,539
Paul	3	2.35	3	10.19	3	19.40	3	19.40	American	Lockenbach Line	471.1	59.2	27.0	Portland, Oreg.	Boston, Mass.	Sugar	11,000	9,019	6,226
William Penn	3	3.40	3	10.42	3	20.35	3	20.35	American	Russell S. S. Co.	439.6	60.2	30.0	Manila, P. I.	Philadelphia, Pa.	General			
City of Victoria	3	3.30	3	11.14	3	21.25	3	21.25	British	J. Coughlan & Co., Ltd.	411.5	54.1	27.0	Port Alice, B. C.	St. Pierre, Miq'on	Sugar	8,377	6,597	4,989
Steel Mariner	3	10.45	3	11.31	3	22.20	3	22.20	American	Isishman S. S. Lines	424.2	56.2	26.0	Kahului, T. H.	New Orleans, La.	General	8,406	7,611	5,450
Sirius	3	11.20	3	15.54	3	23.30	4	18.00	American	U. S. Navy	401.0	54.0	18.0	San Diego, Calif.	Key West, Fla.	General	3,028		

** Nitrate, tin, cotton, and sugar.

** For orders.

* Tug.

* Motor ship.

* Tanker.

* Lumber, paper, pulp, and liquor.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Cleared for sea.	Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Linnea ¹ .	4	1.05	4	14.15	4	17.45	British.	Anglo-Saxon Pet. Co.	412.4	53.4	24.0	Los Angeles, Calif.	Lands End, Eng. ²²	Gasoline.	7,018	6,090	4,303
Vancolite ²³ .	3	15.50	4	15.55	4	15.55	British.	Imperial Oil Co., Ltd.	510.2	68.2	30.0	Talara, Peru.	Halifax, N. S.	(24)	15,709	6,090	4,303
Almagro.	3	20.30	4	19.05	4	19.30	British.	Pacific Steam Nav. Co.	303.4	40.3	21.0	Tacopilla, Chile.	New York, N. Y.	Copper, ore.	3,237	2,826	1,770
Laekenby.	3	21.10	4	8.41	4	21.00	British.	Canadian Wheat Pool.	415.0	54.2	24.0	Vancouver, B. C.	Hampton Rds., Va.	Wheat.	8,300	6,151	4,459
Loekatrine ¹⁵ .	3	23.50	4	9.15	4	20.55	British.	Royal Mail S. P. Co.	485.4	62.3	29.0	Vancouver, B. C.	Rotterdam, Holland.	General.	8,589	10,802	7,595
England Maru.	4	1.05	4	10.48	4	21.20	Japanese.	Kokusai Kisen Kaisha.	365.0	51.0	28.2	Pulupandan, P. I.	New York, N. Y.	Sugar.	7,700	6,214	4,665
Bessie J. ²⁴ .	4	8.55	4	8.55	4	23.00	Panama.	Frank Judd.	16.0	8.0	.....	Bahoa, C. Z.	Cristobal, C. Z.	Ballast.	.....	16	14
Bahoa ²⁵ .	4	00.40	4	11.21	4	22.35	Swedish.	Johnson Line.	427.0	56.2	26.0	Vancouver, B. C.	Gothenburg, Swed.	General.	6,805	7,480	5,533
Moedrik.	4	00.40	4	11.51	4	22.35	Dutch.	Holland-America Line.	472.6	61.1	25.0	Vancouver, B. C.	Rotterdam, Holland.	General.	8,743	9,165	7,056
Rialto ¹⁵ .	4	12.25	4	13.11	5	00.15	Italian.	Nap. Libera-Triestina.	436.6	55.4	26.0	Vancouver, B. C.	Trieste, Italy.	General.	8,837	7,789	5,981
Ethan Allen.	4	4.30	4	14.45	5	12.25	American.	Tampa Intercoastal Co.	439.6	60.2	26.0	Manila, P. I.	New Orleans, La.	(24)	9,328	8,978	6,525
Scota ¹⁷ .	5	2.40	5	6.31	5	13.35	American.	U. S. Navy.	155.0	30.0	.....	Bahoa, C. Z.	Cristobal, C. Z.	Towing barge.	9,539	7,394	5,099
Huguenot ¹⁸ .	5	7.07	5	15.20	5	15.20	American.	Richfield Oil Co.	434.8	56.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	6,988	7,473	5,533
Robin Hood.	4	19.45	5	7.25	5	16.15	American.	Isthmian S. S. Lines.	424.8	55.2	25.0	Everett, Wash.	Camden, N. J.	Lumber.	5,204	4,927	3,597
Cedar Branch.	5	1.55	5	8.31	5	17.15	British.	F. & W. Ritsen.	390.0	51.0	22.0	Corral, Chile.	Liverpool, England.	General.	7,150	6,579	4,810
Dorothy Cahill.	5	6.00	5	9.24	5	19.50	American.	Arrow Line.	410.0	54.2	24.0	Portland, Ore.	Baltimore, Md.	Lumber.	6,750	10,539	7,513
Winipeg ¹⁵ .	5	7.30	5	18.20	6	4.55	French.	Shaw, Savill & Albion.	473.4	58.8	28.0	Vancouver, B. C.	Le Havre, France.	General.	6,538	11,706	8,320
Tarnaki ¹⁵ .	5	10.55	5	11.41	5	20.00	British.	R. Chapman & Son.	482.7	64.2	26.0	P. Chalmers, N. Z.	London, England.	Frozen, general.	7,970	5,761	4,129
Orduña.	5	1.20	5	13.10	5	22.00	British.	Pacific Steam Nav. Co.	550.3	67.3	28.2	Talcahuano, Chile.	Liverpool, England.	Flour, wheat.	6,119	17,146	12,015
Buffalo Bridge.	4	19.30	5	14.02	5	22.55	American.	Charles Nelson & Co.	324.0	46.2	23.0	Eureka, Calif.	N. London, Conn.	Lumber, general.	3,462	3,985	2,630
Fernghin ¹⁵ .	5	12.30	5	14.36	6	00.05	Norwegian.	Strange & Co.	385.3	54.8	25.0	Vancouver, B. C.	Boston, Mass.	Lumber.	6,994	6,615	4,859
Norfolk.	5	16.00	5	17.03	6	4.10	British.	Federal Steam Nav. Co.	520.0	64.2	27.4	Auckland, N. Z.	London, England.	Frozen, general.	7,897	12,963	9,291
Point Arena.	5	19.15	5	19.55	6	3.15	American.	Swayne & Hoyt.	324.0	46.2	23.4	San Francisco, Cal.	New Orleans, La.	General.	4,377	3,984	2,612
Hakutsu.	5	22.40	6	14.20	6	14.20	Japanese.	Tatsuna Kisen Kaisha.	411.5	53.4	28.5	Manila, P. I.	New York, N. Y.	Sugar.	8,000	7,064	5,175
Maru.	6	7.35	6	16.45	6	14.45	American.	Amor-Hawaiian Line.	407.9	53.7	26.0	Seattle, Wash.	Boston, Mass.	General.	7,038	7,107	5,041
Pennsylvania.	6	9.45	6	10.40	6	19.45	German.	Hamburg-American Line	227.5	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	(24)	406	1,632	1,041
Gertrude.	6	13.35	6	18.39	6	22.00	Danish.	Isbrandtsen Moller Co.	418.9	54.7	26.0	Italo, P. I.	Providence, R. I.	Nitrates, general.	7,575	7,385	5,500
Boskop.	6	17.30	6	20.55	7	17.00	Dutch.	Royal Neth. S. S. Co.	400.8	58.3	25.0	Corral, Chile.	Hamburg, Germany	(24)	7,178	7,817	6,097
Santa Inez ¹⁵ .	6	16.40	7	14.15	7	20.20	American.	Grace Line.	370.0	53.2	23.0	Valparaiso, Chile.	New York, N. Y.	(24)	3,991	6,255	4,016
Richmond.	6	17.00	7	14.50	7	23.30	American.	U. S. Navy.	550.0	55.0	28.0	Bahoa, C. Z.	Cristobal, C. Z.	(24)	.....	.....	.....
Ashteville ¹⁹ .	7	7.16	7	20.00	7	20.10	American.	U. S. Navy.	225.0	40.2	.....	Bahoa, C. Z.	Cristobal, C. Z.	(24)	.....	.....	.....
Swiftwind.	5	17.15	7	8.20	7	20.10	American.	Shell Oil Co.	464.6	61.0	19.1	Los Angeles, Calif.	Curacao, D. W. I.	Ballast.	.....	8,473	6,050
Migrant ^{15 20} .	7	9.29	7	22.15	7	22.15	American.	Cal Tucker.	200.3	34.0	16.0	Bahoa, C. Z.	Key West, Fla.	Ballast.	.....	686	332
Heilo.	2	30	7	22.35	7	22.35	Norwegian.	Panama Mail S. S. Co.	214.2	34.3	13.0	Acajutla, Salvador.	Cristobal, C. Z.	(24)	702	1,158	722

²² Crude petroleum and crude oil.²³ Sugar, lumber, and general.²⁴ Sugar, lumber, and general.²⁵ Sugar, lumber, and general.²⁶ Sugar, lumber, and general.²⁷ Sugar, lumber, and general.²⁸ For orders.²⁹ Cocca, coffee, and hides.³⁰ Cocca, coffee, and hides.³¹ Cocca, coffee, and hides.³² Cocca, coffee, and hides.³³ Cocca, coffee, and hides.³⁴ Oats, copper, nitrates, cotton, sugar, hides, and general.³⁵ Oats, copper, nitrates, cotton, sugar, hides, and general.³⁶ Oats, copper, nitrates, cotton, sugar, hides, and general.³⁷ Oats, copper, nitrates, cotton, sugar, hides, and general.³⁸ Oats, copper, nitrates, cotton, sugar, hides, and general.³⁹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁰ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴¹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴² Oats, copper, nitrates, cotton, sugar, hides, and general.⁴³ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁴ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁵ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁶ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁷ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁸ Oats, copper, nitrates, cotton, sugar, hides, and general.⁴⁹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁰ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵¹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵² Oats, copper, nitrates, cotton, sugar, hides, and general.⁵³ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁴ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁵ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁶ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁷ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁸ Oats, copper, nitrates, cotton, sugar, hides, and general.⁵⁹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁰ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶¹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶² Oats, copper, nitrates, cotton, sugar, hides, and general.⁶³ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁴ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁵ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁶ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁷ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁸ Oats, copper, nitrates, cotton, sugar, hides, and general.⁶⁹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁷⁰ Oats, copper, nitrates, cotton, sugar, hides, and general.⁷¹ Oats, copper, nitrates, cotton, sugar, hides, and general.⁷² Oats, copper, nitrates, cotton, sugar, hides, and general.⁷³ Oats, copper, nitrates, cotton, sugar, hides, and general.⁷⁴ Oats, copper, nitrates, cotton, sugar, hides, and general.⁷⁵ Oats, copper, nitrates, cotton, sugar, hides, and general.

PORT OF CRISTOBAL:

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 1.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.	March 1.....	No. 9670 ²⁹	Pan American Airways.....	San Salvador and wayp'ts.
March 2.....	Kungsholm.....	Swedish-American Line.....	New York via wayports.	March 1.....	Darien.....	Leyland S. S. Line.....	Port Limon, Costa Rica.
March 2.....	Perou.....	French Line.....	St. Nazaire and wayports.	March 1.....	Tolosa.....	United Fruit Co.....	New York via Habana.
March 2.....	Darien C-35 ²⁹	Scandia Airplane Co.....	Barranquilla and wayp'ts.	March 1.....	Aron.....	Panama R. R. & S. S. Line	New York via Haiti.
March 3.....	Anachucua ³⁰	United Fruit Co.....	Colon, Rep. of Panama.	March 1.....	Canden.....	United Fruit Co.....	Curacao, D. W. I.
March 3.....	Santa Marta.....	United Fruit Co.....	Cartagena, Colombia.	March 1.....	Parian.....	United Fruit Co.....	New Orleans and wayp'ts.
March 3.....	No. 144-M ²⁹	Pan American-Grace Airways	Talara via wayports.	March 2.....	Salta ³²	A. M. Andrews Investment Co.	Habana, Cuba.
March 4.....	Britannic.....	White Star Line.....	New York, N. Y.	March 3.....	Kungsholm.....	Swedish-American Line.....	New York via wayports.
March 4.....	Pastores.....	United Fruit Co.....	New York via Kingston.	March 3.....	Anachucua ³⁰	United Fruit Co.....	Colon, Rep. of Panama.
March 4.....	Metapan.....	United Fruit Co.....	New York via Kingston.	March 4.....	Perou.....	French Line.....	New York via Kingston.
March 4.....	Irona.....	United Fruit Co.....	New Orleans, La.	March 4.....	No. 9664 ²⁹	Pan American Airways.....	Havre via wayports.
March 4.....	No. 669-M ²⁹	Pan American Airways.....	Miami via wayports.	March 4.....	No. 668-M ²⁹	Pan American Airways.....	San Salvador and wayp'ts.
March 5.....	No. 9670 ²⁹	Pan American Airways.....	San Salvador and wayp'ts.	March 4.....	Britannic.....	White Star Line.....	Miami via wayports.
March 6.....	Contessa.....	Standard Fruit & S. S. Co.	New Orleans, La.	March 4.....	Britannic.....	White Star Line.....	New York via Habana.
March 6.....	Teutonia.....	Hamburg-American Line.....	Port Limon, Costa Rica.	March 5.....	Irona.....	United Fruit Co.....	Port Limon, Costa Rica.
March 6.....	No. 145-M ²⁹	Pan American Airways.....	Tampico via wayports.	March 5.....	Metapan.....	United Fruit Co.....	New York via wayports.
March 6.....	Bogota.....	Colombian S. S. Line.....	Curacao via wayports.	March 5.....	No. 309-N ²⁹	Pan American Airways.....	Curacao via wayports.
March 7.....	Carmelia ³¹	R. Feuillebois.....	New York via wayports.	March 5.....	Pastores.....	United Fruit Co.....	Port Limon, Costa Rica.
March 7.....	Annetta I. ³⁰	A. Tagaropulos.....	Colon, Rep. of Panama.	March 6.....	Darien.....	Leyland S. S. Line.....	Liverpool via wayports.
March 7.....	Irona.....	United Fruit Co.....	Port Limon, Costa Rica.	March 6.....	Darien C-35 ²⁹	Scandia Airplane Co.....	Barranquilla and wayp'ts.
March 7.....	No. 309-N ²⁹	Pan American Airways.....	Curacao via wayports.	March 6.....	Teutonia.....	Hamburg-American Line.....	Hamburg and wayports.
March 7.....	No. 670-M ²⁹	Pan American Airways.....	Miami via wayports.	March 7.....	No. 9670 ²⁹	Pan American Airways.....	San Salvador and wayp'ts.
March 7.....	No. 6664 ²⁹	Pan American Airways.....	Talara via wayports.	March 7.....	Irona.....	United Fruit Co.....	New Orleans and wayp'ts.
March 7.....	No. 144-M ²⁹	Pan American-Grace Airways	Tolara via wayports.	March 7.....	Bogota.....	Colombian S. S. Line.....	New York via Kingston.
March 7.....	Cartago.....	United Fruit Co.....	New Orleans and Habana	March 7.....	Contessa.....	Standard Fruit & S. S. Co.	New Orleans and wayp'ts.
March 7.....	Colombia.....	Royal Netherlands S. S. Co.	Amsterdam and wayports.	March 7.....	Annetta I. ³⁰	A. Tagaropulos.....	Colon, Rep. of Panama.
March 7.....				March 7.....	Carmelia ³¹	R. Feuillebois.....	Colon, Rep. of Panama.

PORT OF BALBOA.

* ARRIVALS.			* DEPARTURES.			
Date.	Vessel.	From—	Date.	Vessel.	Line.	For—
March 6.....	Sambu ³³	Panama Bay, R. P.	March 6.....	Sambu ³³	Hans Elliot.....	Panama Bay, R. P.
March 6.....	Real ³²	Panama Bay, R. P.	March 7.....	Nueva Panama ³⁴	Hans Elliot.....	Panama Bay, R. P.
March 6.....	El Libertador ³³	Panama Bay, R. P.	March 7.....	El Libertador ³³	A. Valdez.....	Panama Bay, R. P.
March 6.....	Des Hermanos ³²	Panama Bay, R. P.	March 6.....	Des Hermanos ³²	A. Valdez.....	Panama Bay, R. P.

* Other than ships passing through the Canal.

³³ Motor schooner. ³⁴ Motor ship.²⁹ Air mail carrier. ³⁰ Motor boat. ³¹ Motor schooner.

New Ships for Standard Fruit and Steamship Company.

The Standard Fruit and Steamship Company has announced that two new passenger and freight vessels are to be placed in its service between Cristobal and New Orleans, via wayports. The new vessels, the *Cefalu* and *Contessa*, which were constructed in 1930, are to replace the *Amapala* and *Atlantida* which have been in the company's service between Cristobal and New Orleans for the past several years. The *Cefalu* and *Contessa* are to maintain the present schedule of the line, which offers a sailing every week, on Saturdays.

The new vessels are 397 feet long, 54 feet beam, of 6,000 gross tons, and have accommodations for 90 first-class passengers.

The first vessel sailing under this new arrangement was that of the *Cefalu*, leaving Cristobal on February 28, to be followed by the *Contessa*, on March 7.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., February 25, 1931.

No. 849.

COLOMBIA, WEST COAST, BUENAVENTURA RIVER.

(1) *Light discontinued*, (2) *light marking wreck to be established*, (3) *submerged obstruction*.

(1) The Captain of the Port of Buenaventura, Colombia, has advised the Governor of The Panama Canal by letter that the flashing white light on the outer end of the pier at Buenaventura, announced established in Notice to Mariners No. 1, Washington, D. C., dated January 3, 1931, and subsequently Notice to Mariners No. 835, Balboa Heights, dated January 22, 1931, has been discontinued and in its stead electric light bulbs have been installed along the sides of the warehouse on the old or National Pier.

(2) A green acetylene gas light will be installed in the near future to mark the wreck of the S. S. *Tritonia*. Further details will be announced later.

(3) The Master of the S. S. *Santa Elisa* reports that on February 19, 1931, at 10.13 a. m. (about one hour before low water) when entering Buenaventura River in latitude 3° 48' 15" N. and longitude 77° 12' 35" W., his ship struck an uncharted obstruction which caused the ship to vibrate sharply. The ship was drawing a maximum of 25 feet and 3 inches. The chart shows a depth of 5½ to 9 fathoms in this position.

H. BURGESS,
Governor.

Traffic by Nationality for February, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for February, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British.....	47	264,797	188,058	315,410	190,566	\$236,369.03	105,807
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	1,558
Colombian.....	4	570	550	880	550	668.90	722
Danish.....	6	29,468	18,913	29,789	19,165	23,641.25	17,256
Dutch.....	5	24,514	17,433	28,683	17,356	19,646.20	9,625
French.....	5	28,995	18,526	34,279	19,188	21,348.50	5,067
German.....	10	38,481	26,778	43,740	26,211	33,472.50	15,446
Italian.....	3	19,712	13,294	24,886	15,093	15,095.62	3,369
Japanese.....	9	48,443	40,335	62,351	37,943	46,140.38	30,803
Norwegian.....	17	76,545	51,949	85,958	52,189	59,021.30	36,673
Panamanian.....	1	6,955	3,659	6,856	3,659	4,573.75	2,187
Swedish.....	7	35,168	22,794	47,532	28,010	25,340.78	9,081
United States.....	96	489,643	370,622	606,824	369,846	417,596.81	227,532
Total, February, 1931....	212	1,072,493	780,220	1,300,803	787,854	912,045.02	465,126
Total, February, 1930....	257	1,258,677	938,452	1,561,155	945,123	1,083,993.81	795,413
Total, February, 1929....	277	1,293,704	987,172	1,629,408	994,588	1,119,089.89	864,344

* Includes naval vessel of 36,640 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	10,571	8,261	12,990	7,601	\$10,326.25	17,417
British.....	55	280,749	206,682	339,336	210,003	275,003.58	342,451
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,084
Colombian.....	4	570	550	880	550	668.90	916
Danish.....	8	39,696	26,990	43,362	27,243	33,737.50	66,033
Dutch.....	6	28,520	20,608	33,737	20,353	25,760.00	34,988
French.....	4	21,272	15,640	26,062	16,060	19,417.05	29,111
German.....	16	63,565	42,294	71,572	42,532	52,867.50	80,809
Italian.....	3	23,369	17,813	32,011	18,538	22,266.25	20,195
Japanese.....	8	43,458	37,064	55,243	36,618	46,009.70	54,274
Norwegian.....	16	71,009	46,565	77,561	46,609	58,206.25	101,146
Panamanian.....	1	6,967	3,622	6,801	3,622	4,512.50	6,109
Swedish.....	6	26,865	19,557	51,652	24,195	24,446.25	70,829
United States.....	89	441,057	341,818	554,928	340,200	426,303.53	636,731
Total, February, 1931....	219	1,062,373	790,930	1,313,445	798,100	1,003,857.76	1,465,093
Total, February, 1930....	234	1,110,578	841,971	1,374,438	839,467	1,047,392.31	1,582,487
Total, February, 1929....	245	1,134,826	876,251	1,426,912	879,266	1,092,871.31	1,686,154

* Includes naval vessel of 36,494 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	10,571	8,261	12,990	7,601	\$10,326.25	17,417
British.....	102	545,546	394,740	654,746	400,569	511,372.61	448,258
Chilean.....	3	13,907	10,770	20,925	12,054	13,462.50	5,642
Colombian.....	8	1,140	1,100	1,760	1,100	1,337.80	1,638
Danish.....	14	69,164	45,908	73,151	46,408	57,378.75	83,289
Dutch.....	11	53,034	38,046	62,420	37,709	45,406.20	44,613
French.....	9	50,267	34,166	60,341	35,248	40,765.55	34,178
German.....	26	102,046	69,072	115,312	68,743	86,340.00	96,255
Italian.....	6	43,081	31,107	56,897	33,631	37,361.87	23,564
Japanese.....	17	91,901	77,399	117,594	74,561	92,150.08	85,077
Norwegian.....	33	147,554	98,514	163,519	98,798	117,227.55	137,819
Panamanian.....	2	13,922	7,281	13,657	7,281	9,086.25	8,296
Swedish.....	13	62,033	42,351	99,184	52,205	49,787.03	79,910
United States.....	185	930,700	712,440	1,161,752	710,046	843,900.34	864,263
Total, February, 1931....	431	2,134,866	1,571,150	2,614,248	1,585,954	1,915,902.78	1,930,219
Total, February, 1930....	491	2,369,255	1,780,423	2,935,593	1,784,590	2,131,386.12	2,377,900
Total, February, 1929....	522	2,428,530	1,863,423	3,056,320	1,873,854	2,211,961.20	2,550,498

* Includes 2 transits of a naval vessel having a total of 73,134 displacement tons.

Tanker Traffic Through the Panama Canal in February, 1931.

During the month of February, 1931, 60 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 334,392, on which tolls of \$294,447.37 were paid. Cargo amounted to 301,655 tons, which included 286,667 tons of mineral oils, 8,327 tons of creosote, and 6,661 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 30.4 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 28.7 per cent.

Tank vessels comprised 13.9 per cent of the total commercial transits through the Canal during the month; made up 15.7 per cent of the total Panama Canal net tonnage; were the source of 15.4 per cent of the tolls collected; and carried 15.6 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of February, 1931, segregated

by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for February, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	33,376	\$24,030.72	.....
French.....	1	5,050	3,636.00	.....
Norwegian.....	3	14,497	10,437.84	.....
United States.....	21	120,528	88,302.93	^a 8,327
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, December, 1930.....	39	215,736	159,626.57	15,360
Total, February, 1930.....	52	263,278	197,075.32	39,854
<i>Pacific to Atlantic.</i>				
Belgian.....	1	4,976	5,710.00	9,200
British.....	7	36,033	37,216.58	60,702
Norwegian.....	2	9,648	10,342.50	17,559
United States.....	19	110,284	114,770.80	^a 205,867
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, December, 1930.....	38	216,170	219,664.05	402,778
Total, February, 1930.....	41	217,200	223,131.27	383,119

^a Creosote.^a Includes 6,661 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during February, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	18	102,312	\$73,664.64	.....
United States to South America.....	2	12,037	8,666.64	.....
United States to Hawaiian Islands.....	1	6,379	4,592.88	.....
Cristobal to United States.....	1	4,543	3,270.96	.....
West Indies to United States.....	1	6,050	4,356.00	.....
Europe to United States.....	7	37,809	28,745.25	^a 8,327
Europe to South America.....	1	4,321	3,111.12	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	18	106,371	\$110,075.20	199,206
United States to Cristobal.....	1	4,543	4,998.75	8,723
United States to Europe.....	5	23,613	25,563.75	42,118
South America to United States.....	3	17,537	19,132.50	36,620
South America to West Indies.....	1	4,964	3,574.08	.....
Philippine Islands to United States.....	1	3,913	4,695.60	^a 6,661

^a Creosote.^a Coconut oil.

Of the tanker traffic passing through the Canal in February, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for February, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
February, 1931.....	25	137,361	\$98,899.92	.....
January, 1931.....	22	124,796	95,151.23	18,325
December, 1930.....	27	151,619	109,165.68	.....
February, 1930.....	39	195,925	143,213.92	9,252
<i>From Los Angeles.</i>				
February, 1931.....	23	128,221	134,310.20	239,521
January, 1931.....	33	176,803	183,017.85	310,902
December, 1930.....	28	159,849	158,238.75	292,060
February, 1930.....	25	138,239	140,667.23	240,931

Dollar Steamship Line Plans Expansion of Around-the-World Service.

The Dollar Steamship Line, operating a fortnightly service of freight and passenger vessels around the world from east to west, calling at 22 ports in 14 countries, plans to establish a circumnavigation service moving eastward. The first step in the establishment of the eastward around-the-world service is to be the sailing of a *President* liner from Manila to New York on March 28, 1931, via Chinese and Japanese ports, Hawaiian Islands, San Francisco, Los Angeles, Panama Canal, and Habana.

Coincident with the inauguration of the eastbound service, the company plans to increase its westbound sailings, placing that service on a weekly basis. Under this proposed program, there will be a Dollar vessel arriving at Cristobal every Thursday afternoon in the westbound service, and one arriving every other Sunday in the opposite direction.

The Dollar Steamship Line celebrated in January the seventh anniversary of the inauguration of its westward around-the-world service and the completion of the 168th globe-girdling voyage.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 5, 1931.

No. 851.

Nicaragua, west coast, Corinto Harbor, condition and location of buoys. The following is quoted from Notice to Mariners No. 8, Washington, D. C., dated February 21, 1931:

The commanding officer of the U. S. S. *Sacramento* reports that the positions of the buoys in Corinto Harbor were checked on January 28, 1931, and found to be as follows—

- Buoy No. 1, missing (discontinued).
- Light buoy No. 2, 500 yards 320 degrees from Cardon Head Light.
- Buoy No. 3, 515 yards 350 degrees from Cardon Head Light.
- Buoy No. 4, 425 yards 132 degrees from Cardon Head Light.
- Buoy No. 5, 350 yards 74 degrees from Cardon Head Light.
- Buoy No. 6, 800 yards 135 degrees from Cardon Head Light.
- Light buoy No. 7, 760 yards 117 degrees 30 minutes from Cardon Head Light.
- Buoy No. 8, 1,160 yards 125 degrees from Cardon Head Light.
- Buoy No. 9 was in its charted position.
- Buoy No. 10, 1,500 yards 117 degrees 30 minutes from Cardon Head Light.
- Buoy No. 12, 1,115 yards 204 degrees from the dock light.
- Buoy No. 14, missing.
- Buoy No. 16, 645 yards 160 degrees from the dock light (almost sunk).
- Buoy No. 18, missing.
- Buoy No. 20, 710 yards 53 degrees from the dock light.
- Buoy No. 22, 935 yards 33 degrees from the dock light.

NOTE.—Light buoy No. 2 is reported to be 160 yards out of position, indicating that its proper location is in its previously charted position, 340 yards 312 degrees from Cardon Head Light. With the exception of Nos. 2, 4, 6, and 7, the buoys are in need of paint.

(See Notice to Mariners No. 848, Balboa Heights, dated February 21, 1931.)

H. BURGESS,
Governor.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending March 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orinoco	Hamburg-American Line	February 22	February 22		443
Bolivar	Colombian S. S. Line	February 22	February 22	234	124
Calamares	United Fruit Co.	February 22	February 22	50	1,172
Delftdijk	Holland-America Line	February 22	February 23	233	338
Alaska	French Line	February 22	February 23	37	3
Tai Shan	Barber S. S. Line	February 22	February 23	381	(²)
Caldas	National Navigation Co.	February 22	February 27	215	223
Corinto	Panama Mail S. S. Line	February 22	February 28	1,680	239
Guayaquil	Panama R. R. S. S. Line	February 23	February 24	1,038	4
Heredia	United Fruit Co.	February 23	February 24	8	180
Emil Kirdorf	Hamburg-American Line	February 23	February 24	51	81
Pearl Marie	R. Feuillebois	February 24	February 24	(¹)	231
Gregalia	Donaldson Brothers	February 24	February 24	(¹)	175
Venezuela	Panama Mail S. S. Co.	February 24	February 25	78	708
Wisconsin	French Line	February 24	February 25	105	191
Crijnsen	Royal Netherlands S. S. Co.	February 24	February 25	107	8
Colombo	Italian S. S. Line	February 24	February 26	20	594
Suriname	United Fruit Co.	February 24	February 28	923	(²)
Agnete Maersk	Aluminium Line	February 25	February 25	226	(²)
Tela	United Fruit Co.	February 25	February 25	961	60
Ancon	Panama R. R. S. S. Line	February 25	February 25	2,285	
Toloo	United Fruit Co.	February 25	February 26		246
Santa Marta	United Fruit Co.	February 25	February 26	289	530
Buenaventura	Panama R. R. S. S. Line	February 26	February 27	45	(²)
El Salvador	Panama Mail S. S. Co.	February 26	February 27	1,365	328
Pensylvanie	French Line	February 26	February 27	510	(²)
Kinai Maru	Osaka Shosen Kaisha	February 26	February 27	49	10
Baralt	Royal Netherlands S. S. Co.	February 26	February 26	155	
Virgilio	Italian S. S. Line	February 26	February 27	223	15
Syra	Hamburg-American Line	February 26	February 27	17	741
Acajutla	Pacific Steam Navigation Co.	February 26	February 26	460	
Cerigo	Hamburg-American Line		February 27		75
Camden	United Fruit Co.	February 27		9,655	
Arizona	French Line	February 27	February 27	63	139
Santa Rita	Grace Line	February 27	February 28	105	189
Baracoa	United Fruit Co.	February 27	February 28	470 ¹	(²)
Cefalu	Standard Fruit & S. S. Co.	February 27	February 28	143	415
Manizales	North German Lloyd	February 27	February 27	141	
Gymeric	Anglo-Saxon Petroleum Co.	February 27	February 27	8,773	
Darian	Leyland S. S. Line	February 27	February 27	476	
Pacific Reliance	Furness, Withy & Co.	February 28	February 28	(²)	270
Oakland	Hamburg-American Line	February 28	February 28	548	208
Crijnsen	Royal Netherlands S. S. Co.	February 28	February 28	1	1,010
Tela	United Fruit Co.	February 28	February 28	72	397
Parismina	United Fruit Co.	February 28	February 28	177	
Canadian Cruiser	Canadian National Steamships	February 28	February 28	20	(²)
Ancon	Panama R. R. S. S. Line		March 1		478
Manizales	North German Lloyd		March 1		252
Parismina	United Fruit Co.		March 1		32
Toloo	United Fruit Co.	March 1	March 1	10	391
Abana	Hamburg-American Line	March 1	March 1	14	627
Santa Barbara	Grace Line	March 2	March 2	6	49
Los Angeles	Hamburg-American Line	March 2	March 2	71	47
Iowa	French Line	March 2	March 3	572	(²)
Cauca	National Navigation Co.	March 2	March 2	202	
Perou	French Line	March 2	March 4	28	922
Baralt	Royal Netherlands S. S. Co.		March 3		76
Goslar	North German Lloyd	March 3	March 3	6	237
Panama	Danish-East Asiatic Line	March 3	March 4	184	297
Santa Marta	United Fruit Co.	March 3	March 4	170	801
Laurits Swenson	Fred Olsen & Co.	March 3	March 4	(²)	700
Nosa Chief	N. O. & S. A. S. S. Co.	March 3	March 5	678	60
La Perla	United Fruit Co.	March 3	March 7	1,275	(²)
Acajutla	Pacific Steam Navigation Co.	March 3	March 4		539
Iriona	United Fruit Co.	March 4	March 4	747	3
San Rafael	Quaker S. S. Line	March 4	March 4	991	(²)
Lochkatrine	Royal Mail Steam Packet Co.	March 4	March 5	(²)	244
Moerdijk	Holland-America Line	March 4	March 5		170
Metapan	United Fruit Co.	March 4	March 5	482	417
Pastores	United Fruit Co.	March 4	March 5	588	14
Ethan Allen	Tampa Intercean Co.	March 4	March 5	229	(²)
Rialto	Navigazione Libera Tristina	March 5	March 5	(²)	298
Orduña	Pacific Steam Navigation Co.	March 5	March 6	120	11
Winnipeg	French Line	March 5	March 6	291	161
Santa Maria	Grace Line	March 5	March 6	6	16
Arana	Pacific Steam Navigation Co.	March 6	March 7	(²)	979
Darian	Leyland S. S. Line	March 6	March 7	550	97
Tuxtonia	Hamburg-American Line	March 6	March 7		
Durazzo	Hamburg-American Line	March 6	March 6	412	

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons. (²)
Cellina.....	Navigazione Libera Triestina.....	March 6.....	March 7.....	99	
Contessa.....	Standard Fruit & S. S. Co.....	March 6.....	March 7.....	414	414
Bogota.....	Colombian S. S. Line.....	March 6.....	March 7.....	22	5
Cartago.....	United Fruit Co.....	March 7.....	March 7.....	200	
Santa Inez.....	Grace Line.....	March 7.....	March 7.....	99	27
Colombia.....	Royal Netherlands S. S. Co.....	March 7.....	March 7.....	43	
Boskoop.....	Royal Netherlands S. S. Co.....	March 7.....	March 7.....	29	376
Rio de Janeiro Maru..	Osaka Shosen Kaisha.....	March 7.....	March 7.....	32	
Königsberg.....	North German Lloyd.....	March 7.....	March 7.....	57	94
Helo.....	Panama Mail S. S. Line.....	March 7.....	March 7.....	780	
Irióna.....	United Fruit Co.....	March 7.....	March 7.....	12	164

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending March 7, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Rita.....	Grace Line.....	February 28.....	February 28.....	26	175
Montebello.....	Union Oil Co.....	February 28.....	March 1.....	11,800	
St. Mihil.....	U. S. Government.....	February 28.....	March 3.....	677	85
Cauca.....	National Navigation Co.....	March 2.....	March 2.....	94	28
Santa Barbara.....	Grace Line.....	March 2.....	March 2.....	1	1
La Perla.....	United Fruit Co.....	March 2.....	March 2.....	121	
Sirius.....	U. S. Government.....	March 3.....	March 3.....	35	2
Fulton.....	U. S. Government.....	March 3.....	March 3.....	2	
Taranaki.....	Shaw, Savill & Albion.....	March 4.....	March 4.....		9
Ethan Allen.....	Tampa Intercean S. S. Co.....	March 4.....	March 4.....	129	
Buffalo Bridge.....	Nelson S. S. Co.....	March 4.....	March 5.....	238	
Nosa Chief.....	N. O. & S. A. S. S. Co.....	March 5.....	March 5.....	435	8
Swiftwind.....	Shell Oil Co.....	March 5.....	March 7.....	11,578	
President Adams.....	Dollar Line.....	March 6.....	March 6.....		1
Virginia.....	Panama-Pacific Line.....	March 6.....	March 6.....		201
Santa Inez.....	Grace Line.....	March 6.....	March 7.....	29	
La Perla.....	United Fruit Co.....	March 7.....	March 7.....		106

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective March 10, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.31
Bronze, Tobin, average.....	Lb.	.26
Gasoline, motor grade.....	Gal.	.12
Metal, yellow.....	Lb.	.29
Oakum, Navy, spun.....	Lb.	.12
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.49
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.41
Oil, kerosene, in drums.....	Gal.	.08
Oil, marine engine.....	Gal.	.50
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.12
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... \$1.20
 2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... .72
 3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
 4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
 5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
 6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
 7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.
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Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address

The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office

at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 18, 1931. No. 33.

Cargo Through the Canal During February, 1931.

On pages 472 and 473 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in February, 1931. This cargo, segregated according to direction as compared with February, 1930, and the differences, is shown in the following tabulation:

	February, 1930.	February, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	795,413	465,126	-330,287
Pacific to Atlantic.....	1,582,487	1,465,093	-117,394
Total.....	2,377,900	1,930,219	-447,681

It will be noted from the above that the Atlantic to Pacific tonnage decreased 330,287 tons (41.5 per cent) as compared with February, 1930, and that from the Pacific to Atlantic decreased 117,394 tons (7.4 per cent), making a total decrease in cargo tonnage in both directions of 447,681 tons (18.8 per cent). The heavy decline in the Atlantic to Pacific tonnage was due to lightened shipments of practically all the important commodities usually routed in this direction. In the opposite direction, there were several increases in various commodities, but the curtailment in shipments of other items such as mineral oils, ores, lumber, and cold storage products was sufficient to produce the aforementioned decrease in the Atlantic-bound tonnage.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-five and four-tenths per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 29.3 per cent in Europe, these two areas contributing to almost 95 per cent of the cargo moving in this direction. In comparison with February, 1930, tonnage from the United States declined 219,675 tons, or 41.9 per cent, while that from Europe decreased 79,609 tons, or 36.8 per cent. In its relation with the total cargo passing through the Canal from the Atlantic to the Pacific, the percentage of the cargo coming from the United States was approximately the same as in February last year, while that from Europe was slightly higher in February, 1931.

Destination.—Forty-eight and seven-tenths per cent of the Pacific-bound cargo tonnage was destined to the United States; 19.4 per cent to Asia; 12.6 per cent to Australasia; and 9.8 per cent to South America. Tonnage to all these areas decreased as follows in comparison with February, 1930: To the United States, 82,018 tons, or 26.6 per cent; to Asia, 110,933 tons, or 55.1 per cent; to Australasia, 71,442 tons, or 54.9 per cent; and to South America, 52,872 tons, or 53.8 per cent.

In its relation to the total cargo, the percentage of the total cargo destined to the United States was considerably higher last month than in the corresponding month a year ago, while that to Asia, Australasia, and South America was lower.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 48.0 per cent came from the United States; 24.4 per cent from South America; 16.3 per cent from Canada; 6.4 per cent from Asia; and 3.7 per cent from Australasia. The amounts originating in Canada and Asia showed proportionate as well as actual increases in comparison with February, 1930, of 54,690 tons, or 29.7 per cent, and 22,091 tons, or 30.9 per cent, respectively. Cargo tonnage from the United States declined 36,666 tons, or 5.0 per cent, although the proportion of the total cargo in February, 1931, was slightly higher than in the corresponding month in 1930. Cargo from South America showed a decrease in its relation to the total cargo and in actual tonnage of 111,234 tons, or 23.7 per cent, as did that from Australasia which registered a decline of 39,400 tons, or 42.0 per cent.

Destination.—Segregated according to destination, 58.3 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 38.1 per cent to Europe. Tonnage to the United States decreased 51,640 tons, or 5.7 per cent, in comparison with February, 1930, and that to Europe declined 43,054 tons, or 7.2 per cent. In their proportions to the total cargo, the tonnage to both these areas was approximately the same as in February, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify almost 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for February, 1930, or February, 1931, are listed in the following tabulation, showing differences:

Commodity.	February, 1930.	February, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	12,396	4,026	-8,370
Cement.....	20,187	17,670	-2,517
Coal and coke.....	21,976	9,692	-12,284
Cotton.....	19,889	28,056	+8,167
Manufactured goods:			
Iron and steel.....	155,221	93,603	-61,618
Machinery.....	15,484	8,425	-7,059
Railroad material.....	11,529	1,490	-10,039
Textiles.....	12,096	7,356	-4,740
Tinplate.....	28,839	15,445	-13,394
Miscellaneous.....	15,257	10,839	-4,418
Metals, various.....	10,457	2,439	-8,018
Metal, scrap.....	13,104	180	-12,924
Oils, mineral.....	69,302	18,456	-50,846
Paper.....	24,315	14,609	-9,706
Phosphates.....	57,225	19,382	-37,843
Slag.....	19,984	25,817	+5,833
Sulphur.....	20,023	5,300	-14,723
Tobacco.....	13,111	8,310	-4,801

The above 18 commodity groups for February, 1931, comprise 62.6 per cent of the cargo moving from the Atlantic to the Pacific. All of the items, with the exception of cotton and slag, decreased in comparison with February, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify over 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of February, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	February, 1930.	February, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	11,459	21,084	+9,625
Beans.....	5,729	16,811	+11,082
Canned goods (fish, fruit, vegetables, etc.).....	64,208	67,861	+3,653
Coffee.....	17,935	21,562	+3,627
Cold storage (food products) *.....	58,269	31,343	-26,926
Flour.....	7,636	11,465	+3,829
Fruit, dried.....	12,447	22,499	+10,052
Fruit, fresh.....	12,634	31,493	+18,859
Lumber.....	251,946	224,682	-27,264
Metals, various.....	45,140	44,036	-1,104
Nitrates.....	184,609	155,554	-29,055
Oil, coconut.....	8,711	10,426	+1,715
Oils, mineral.....	380,319	289,936	-90,383
Ores (principally iron).....	154,554	112,003	-42,551
Sugar.....	70,899	88,420	+17,521
Wheat.....	173,169	200,998	+27,829
Wool.....	22,433	10,755	-11,683

* Does not include fresh fruit.

The above 17 commodity groups for February, 1931, comprise 92.9 per cent of the cargo moving from the Pacific to the Atlantic. Ten of the items show increases and 7 decreases, in comparison with February, 1930.

(Continued on next page.)

Libera Line Adds Two Vessels to its European-West Coast North America Service.

The Navigazione Libera Triestina (Libera Line) has announced the addition of two vessels to its service between Mediterranean ports of Europe and the west coast of North America. The first of these vessels, the *Duchessa D'Aosta*, transited the Canal on March 12, en route to the west coast in her initial voyage in this run and is to be followed by the *Timavo* in May. Each of the additional vessels, which were recently redesigned to meet the requirements of this trade, carries 58 passengers. The two steamers will be operated in conjunction with the *California* (a description of which appeared in THE PANAMA CANAL RECORD of December 17, 1930), and the motor ships *Feltre*, *Fella*, *Cellina*, and *Rialto*, all of the combination passenger and cargo type. All the vessels of the line are equipped with facilities for transporting refrigerated cargo.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 14, 1931.

No. 854.

Central America, west coast, Gulf of Fonseca, La Union approach, Chiquirin Point, lighthouse building.—The following is quoted from Notice to Mariners No. 9, Washington, D. C., dated February 28, 1931:

The second officer of the American S. S. *San Jose* reports that a lighthouse is being erected on Chiquirin Point, Gulf of Fonseca.

Approximate position: 13° 17' 30" N., 87° 46' 50" W.

H. BURGESS,
Governor.

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, February, 1931.—Continued from page 471.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.				ASIA.				Grand total.	Per cent of total cargo.				
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ^a	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. ¹	Total, Asia.	
UNITED STATES—																								
North Atlantic ports.	134,127	693	735	473	9,925	145,953	10,871	1,202	480	3,664	241	16,458	3,387	3,620	1,396	8,403	9,979	14,032	6,234	1,533	31,778	202,592	43.6	
South Atlantic ports.	4,870					4,870										212	95			9,594	1,358	11,047	16,129	3.5
Gulf ports.	32,232	6,587				38,819											891	2,709	3,769	39,129	46,498	85,317	18.3	
Total, United States.	171,229	7,280	735	473	9,925	189,642	10,871	1,202	480	3,664	241	16,458	3,599	3,620	1,396	8,615	10,965	16,741	19,597	42,020	89,323	304,038	65.4	
East coast of Canada.													2,115	2,844		4,959						4,959	1.1	
East coast of Central America.			182			182																182	0.04	
Cristobal, C. Z. ^a	2,585	8	2,439			5,042	1,136	648	362	419	222	2,787										7,829	1.7	
West Indies.	110	480				590		64				64										654	0.1	
Total, North America.	173,934	7,768	3,356	473	9,925	195,456	12,007	1,914	842	4,083	463	19,309	5,714	6,464	1,396	13,574	10,965	16,741	19,597	42,020	89,323	317,662	68.3	
Europe:																								
British Isles.	9,475	6,542				16,017	5,293	29	364	912	150	6,748		31,784		31,784						54,549	11.7	
Belgium.	14,942	1,673	92	65		16,772	1,529	20	51,103	160	2,817			10,941	490	11,431						31,020	6.7	
France.	1,518	192	117			1,827	208					283										2,110	0.5	
Germany.	5,242	81				5,323	2,181	58	223	413	401	3,276	157			157						8,756	1.9	
Holland.	7,798	135				7,933	2,558	283	66	395		3,302										11,235	2.4	
Italy.	349	50	544			943	1,026		629			2,255				1,733						3,198	0.7	
Norway and Sweden.	2,053	55	8,970	1,839		12,917						153										14,650	3.1	
Spain and Portugal.		50				50	103															203	0.04	
Europe ¹ .	3,089	478	626			4,193	1,656	29	8	669	4,218	6,580										10,773	2.3	
Total, Europe.	44,466	9,256	10,349	1,904		65,975	15,154	419	666	4,246	4,929	25,414	1,890	42,725	490	45,105						136,494	29.3	
East coast of South America.																				923		923	0.2	
Grand total.	226,636	18,157	13,723	2,377	9,925	270,817	27,161	2,994	1,508	5,329	5,392	45,384	7,604	49,189	1,886	58,679	10,965	16,741	20,520	42,020	90,246	465,126	100.0	
Per cent of total cargo:																								
February, 1931.	48.7	4.0	2.9	0.5	2.1	58.2	5.9	0.6	0.3	1.8	1.2	9.8	1.6	10.6	0.4	12.6	2.4	3.6	4.4	9.0	19.4	100.0	.....
February, 1930.	38.7	2.5	2.9	0.7	1.1	45.9	4.6	0.7	0.3	1.6	5.2	12.4	2.4	11.7	2.2	16.3	1.8	5.1	12.4	6.1	25.4	100.0	.....
February, 1929.	38.8	3.6	2.7	0.4	1.3	46.8	8.6	1.2	0.5	2.7	4.5	17.5	5.5	7.9	3.7	17.1	1.3	5.3	7.7	4.3	18.6	100.0	.....

^a General cargo not routed so as to allow segregation between definite ports. ¹ Includes both local and transit cargo.

^a General cargo not routed so as to allow segregation between definite ports.

^a Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, February, 1931.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.												Grand total.	Per cent of total cargo.			
	UNITED STATES.					West Indies.					Total, North America.	EUROPE.															
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z. ²	West Indies.	Total, North America.	British Isles.		Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.			India.	Africa.	
NORTH AMERICA:																											
W. coast United States.	434,865	3,986	53,591	492,442					11,492	3,064	506,998	100,263	12,699	1,272	9,320	29,005	10,404	726	1,543	90	22,976	188,298	6,245	2,050	241	703,832	48.4
W. coast of Canada.	21,607		507	22,114	6,074				1,768	29,956	75,599	5,461	1,196	20,713	2,248	11,123	299	13,513		77,209	207,361	1,378		7	238,702	16.3	
W. coast of Cen. Amer.	181			181					10,377	20	10,578		37	59	282	1,518	159	1,000		3,050	6,105	475				17,158	1.2
Total, N. America.	456,653	3,986	54,098	514,737	6,074				21,869	4,852	547,532	175,802	18,197	2,527	30,315	32,771	21,686	1,025	16,056	90	103,235	401,764	8,098	2,050	248	959,692	65.5
SOUTH AMERICA:																											
Chile.	112,899	78,464	15,259	206,622					1,452	2,073	210,148	7,410	5,795	1	3,546	610	156	1,158	2,473	4	55,618	76,771				286,919	19.6
Colombia.	1,726			1,726					2,262	17	4,005		17		20				37							4,042	0.3
Ecuador.	14,396			14,396					1,271		15,667				36		251		287							15,954	1.1
Peru.	26,715			26,715					14		26,729	6,674	358	200	8,123	1,395	8		1,286		18,044					44,773	3.0
W. coast South America	1,855			1,855					429		2,284				169		3,059		195		3,423					5,707	0.4
Total, S. America.	157,591	78,464	15,259	251,314					5,429	2,090	253,833	14,084	6,170	201	11,669	2,230	156	1,409	5,540	4	57,099	98,562				357,395	24.4
AUSTRALASIA:																											
Australia.	1,973			1,973	454						2,427															2,427	0.2
New Zealand.	1,133			1,133	433				15		1,581	50,375									50,375					51,956	3.5
Total, Australasia.	3,106			3,106	887				15		4,008	50,375									50,375					54,383	3.7
ASIA:																											
Philippine Islands.	65,153			65,153							73,620															73,620	5.0
China.	2,740			2,740					463		3,203															3,203	0.2
Japan.	6,516			6,516					48		6,561															6,561	0.5
Far East.	2,957			2,957							2,957															2,957	0.2
Total, Asia.	77,366			77,366					511		86,431															86,431	6.4
Grand total.	694,716	82,450	77,824	854,990	6,961				27,824	7,029	896,804	240,321	24,367	9,920	41,984	35,001	21,842	2,434	21,596	94	160,334	557,893	8,098	2,050	248	1,465,093	100.0
Per cent of total cargo:																											
February, 1931.	47.4	5.6	5.3	58.3	0.5				1.9	0.5	61.2	16.4	1.7	0.7	2.8	2.4	1.5	0.2	1.5		10.9	38.1	0.6	0.1		100.0	.....
February, 1930.	50.4	2.9	4.0	57.3	1.9	0.2			1.3	0.8	61.5	19.0	0.5	0.1	0.7	3.3	1.0	0.2	0.7		12.4	37.9	0.1	0.5		100.0	.....
February, 1929.	43.8	2.6	7.4	53.8	1.9	0.2			1.1	0.3	57.3	19.4	1.3	1.2	1.3	3.5	1.3	0.2	0.3		12.7	42.1	0.1	0.5		100.0	.....

¹ General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 14, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Amerikaland ²	7	15.05	8	00.05	8	10.05	Swedish.	Ore S. S. Corp.	561.0	72.0	21.5	Baltimore, Md.	Cruz Grande, Chile	Ballast.		15,500	4,496
Tai Yin ²	7	22.00	8	9.36	8	10.30	Norwegian.	Barber S. S. Line.	461.4	60.6	19.6	New York, N. Y.	Shanghai, China.	General.		1,649	9,997
Durazzo	6	19.45	8	5.00	8	12.11	German.	Hamburg-American Line	226.0	34.0	13.8	Cristobal, C. Z.	Guayaquil, Ecuador	General.		132	1,633
Rio de Janeiro	7	8.05	8	6.00	8	13.40	Japanese.	Osaka Shosen Kaisha.	461.0	62.0	22.7	Buenos Aires, Arg.	Kobe, Japan.	General, cotton.		3,694	10,437
Democracy	7	3.10	8	7.10	8	15.05	American.	Nelson Line.	377.0	52.0	16.8	Baltimore, Md.	Seattle, Wash.	General.		2,108	5,434
Pacific	8	9.35	8	9.50	8	17.07	American.	Dimon S. S. Corp.	409.6	54.2	18.7	Philadelphia, Pa.	Seattle, Wash.	General.		3,790	6,537
Redwood	8	13.25	8	13.35	8	21.20	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	16.0	New York, N. Y.	Pto. Chicama, Peru	Ballast.		5,919	4,400
Liverpool Maru	8	1.00	8	15.00	8	22.23	British.	Shaw, Savill & Albion	500.9	63.0	28.5	London, England	Napier, N. Z.	General.		4,535	12,083
Mahana	8	1.00	8	15.00	8	22.23	American.	J. A. Hanson	500.9	63.0	28.5	Cristobal, C. Z.	Gatun, C. Z.	(⁶)		2	2
Condenda ²			8		8	9.32	American.	J. A. Hanson				Cristobal, C. Z.	Gatun, C. Z.	Ballast.		2	2
Hull ²			8		8	9.32	American.	J. A. Hanson				Cristobal, C. Z.	Gatun, C. Z.	Ballast.		2	2
City of Elwood ²	8	15.25	8	20.10	9	11.50	American.	Roosevelt S. Co., S.B.	395.5	55.0	23.0	Newport News, Va.	Shanghai, China.	Case oil, general.		5,097	7,344
El Buaro ²	2-15	19.55	8	19.40	9	12.10	Ecuadorian.	Anglo-Ecuador. Oilfields.	116.0	23.0	10.0	Cristobal, C. Z.	Ecuador.	Ballast.			
Chester ⁴	9	4.05	9	6.15	9	12.43	American.	U. S. Navy.	582.0	65.0		Newport News, Va.	Balboa, C. Z.	Ballast.			
Anzonan	8	20.20	9	6.35	9	15.40	American.	Amer-Hawaiian Line.	434.3	57.7	17.6	Boston, Mass.	Portland, Oreg.	General.		3,189	7,983
Forbes	8	20.40	9	7.45	9	15.09	American.	Munson, McCor'k Line.	409.8	54.2	17.4	Philadelphia, Pa.	Tacoma, Wash.	General.		2,513	6,831
Hauptman.	9	5.00	9	8.40	9	16.04	Japanese.	Nippon Yusen Kaisha.	440.4	57.0	24.6	Philadelphia, Pa.	Kobe, Japan.	(⁷)		6,633	8,139
Asuka Maru ²	9	5.00	9	8.40	9	16.04	Japanese.	Nippon Yusen Kaisha.	440.4	57.0	24.6	Philadelphia, Pa.	Kobe, Japan.	(⁷)		6,633	8,139
Montgomery	9	13.10	9	13.25	9	21.15	American.	Isthmian S. S. Lines	424.0	56.2	25.3	Norfolk, Va.	Singapore, Str. Set.	Steel, general.		7,919	7,611
City	9	13.10	9	13.25	9	21.15	American.	Isthmian S. S. Lines	424.0	56.2	25.3	Norfolk, Va.	Singapore, Str. Set.	Steel, general.		7,919	7,611
Cauca ²	9	30.50	9	13.50	9	21.15	Colombian.	National Navigation Co.	107.0	22.0	8.3	Cristobal, C. Z.	Buenaventura, Col.	General.		60	262
Oroya.	9	8.40	9	14.30	9	22.28	Dutch.	Pacific Steam Nav. Co.	525.3	62.8	23.0	Liverpool, England	Talcahuano, Chile	General.		2,401	13,137
Holder	8	19.10	9	15.18	9	22.55	Dutch.	Royal Neth. S. S. Co.	361.0	49.0	18.5	Hamburg, Germany	Corral, Chile	General.		2,374	5,117
Sea Thrush	9	16.00	9	18.40	10	10.11	American.	Shepard S. S. Co.	410.0	54.0	19.0	Boston, Mass.	Seattle, Wash.	General.		4,896	6,625
Gen. M. H.	9	14.20	9	22.45	10	9.25	American.	Sudden & Christenson.	402.6	53.0	16.7	Baltimore, Md.	Los Angeles, Calif.	General.		2,610	6,575
Sherman.	9	14.20	9	22.45	10	9.25	American.	Sudden & Christenson.	402.6	53.0	16.7	Baltimore, Md.	Los Angeles, Calif.	General.		2,610	6,575
Gen. Wm. M.	9	9.10	9	7.00	9	14.40	American.	U. S. Army	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.		2,104	7,767
Graham ²	9	9.10	9	7.00	9	14.40	American.	U. S. Army	156.0	32.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.		2,104	7,767
San Jose ²	9	9.10	9	7.00	9	14.40	French.	French Line.	431.3	57.2	19.10	Havre, France.	Vancouver, B. C.	General.		2,104	7,767
Fort	9	14.30	10	4.40	10	15.48	American.	Nelson Line.	324.0	46.2	24.0	Freeport, Texas	San Francisco, Cal.	Sulphur		4,759	3,984
Armstrong.	9	9.40	10	6.12	10	14.04	American.	Panama Mail S. S. Co.	360.0	51.6	22.6	New York, N. Y.	San Francisco, Cal.	Sulphur		1,576	3,776
Guatemala.	9	9.40	10	6.12	10	14.04	American.	Panama Mail S. S. Co.	360.0	51.6	22.6	New York, N. Y.	San Francisco, Cal.	Sulphur		1,576	3,776
Herman Frisch.	9	22.20	10	6.50	10	16.32	American.	Tex. Gulf & Freeport Sul.	356.0	51.6	22.6	Freeport, Texas	San Francisco, Cal.	Sulphur		5,205	5,349
Levant Arrow ²	10	9.15	10	9.30	10	17.17	American.	Standard Transp. Co.	408.3	62.7	21.6	Providence, R. I.	Los Angeles, Calif.	Ballast.		5,205	5,349
Santa Cecilia.	10	5.40	10	10.00	10	18.30	American.	Argonaut S. S. Line.	404.0	54.0	27.8	New York, N. Y.	Vancouver, B. C.	Steel, general.		7,607	6,745
Sacramento	10	11.40	10	11.55	10	18.55	British.	Reardon Smith Line.	402.0	54.3	14.3	Cardiff, England.	Vancouver, B. C.	Ballast.		6,621	4,916
Valley.	10	11.40	10	11.55	10	18.55	British.	Reardon Smith Line.	402.0	54.3	14.3	Cardiff, England.	Vancouver, B. C.	Ballast.		6,621	4,916
Tanker.																	

¹ Phosphate rock, lubricating oil, etc.² Towing launch Hull.³ Mine planter.⁴ Cruiser.⁵ Launch.⁶ Motor ship.⁷ Tanker.

Ohioan.....	10 13.20	10 13.25	10 20.54	10 22.05	American.....	Amor-Hawaiian Line.....	407.7	53.7	24.0	Weston, Mass.....	Tacoma, Wash.....	General.....	2,734	7,105	4,991
San Clemente.....	10 11.30	11 3.12	11 11.40	11 16.00	American.....	States S. S. Co.....	410.0	54.4	17.8	Weston, Mass.....	Tacoma, Wash.....	General.....	2,852	6,476	4,982
City of San Francisco.....	9 5.45	11 4.50	11 12.50	11 14.05	American.....	Panama Mail S. S. Co.....	296.0	45.0	17.8	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	878	3,848	2,606
Wilmington.....	10 15.10	11 5.00	11 13.25	11 14.05	American.....	Williams S. S. Line.....	386.3	52.2	16.3	Baltimore, Md.....	Seattle, Wash.....	General.....	1,327	3,089	7,080
Tongoraro.....	10 16.25	11 6.05	11 14.12	11 15.15	British.....	N. Z. Shipping Co.....	400.3	63.7	20.6	London, England.....	London, England.....	Base slag.....	5,041	10,817	7,562
Dongoraro.....	10 18.20	11 6.55	11 14.49	11 16.00	British.....	Blue Star Line.....	499.8	64.0	19.6	Newcastle, Eng.....	Vancouver, B. C.....	Ballast.....	11,163	8,143	7,943
Lesmar.....	10 19.35	11 7.30	11 16.48	11 17.45	American.....	Calmar S. S. Line.....	409.8	54.2	23.0	Baltimore, Md.....	Seattle, Wash.....	Steel, general.....	7,200	6,581	4,793
Lake Gorn.....	10 22.15	11 8.40	11 17.37	11 19.15	American.....	Ford Motor Co.....	250.5	43.6	19.7	Chester, Pa.....	Portland, Ore.....	Automobile parts.....	2,316	2,692	1,808
Gertrude.....	11 6.40	11 8.25	11 16.53	11 17.55	American.....	Kellogg S. S. Corp.....	391.9	51.2	17.0	Boston, Mass.....	Los Angeles, Calif.....	Ballast.....	5,393	3,719	
Lillian.....	11 4.40	11 9.45	11 18.22	11 19.15	American.....	Lukenbach Line.....	448.9	60.2	21.0	Boston, Mass.....	Tacoma, Wash.....	General.....	3,000	9,294	6,865
Texas.....	11 7.15	11 10.30	11 18.52	11 20.00	American.....	The Texas Co.....	416.8	56.0	20.0	New York, N. Y.....	Los Angeles, Calif.....	Ballast.....	6,782	4,937	
Florence.....	11 10.40	11 11.20	11 19.15	11 20.50	American.....	Lukenbach Line.....	401.8	59.0	20.0	New Orleans, La.....	Seattle, Wash.....	General.....	3,802	6,002	4,621
Fosna.....	11 8.55	11 12.35	11 20.10	11 21.00	Norwegian.....	Anglo-Saxon P&T Co.....	451.0	59.0	18.4	London, England.....	Los Angeles, Calif.....	Ballast.....	8,318	5,771	
Kwanto Maru.....	11 16.05	11 18.20	12 10.10	12 11.00	Japanese.....	Osaka Shosen Kaisha.....	460.0	61.6	21.0	Boston, Mass.....	Hongkong, China.....	General.....	3,823	9,407	7,777
Reaper.....	11 15.50	11 19.20	12 9.11	12 10.08	American.....	The Texas Co.....	416.8	56.1	19.0	Wilmington, N. C.....	Los Angeles, Calif.....	Ballast.....	6,932	5,041	
Nebroska.....	11 9.30	12 3.10	12 11.02	12 12.25	British.....	Royal Mail S. P. Co.....	450.0	58.0	20.8	Rotterdam, Hol'd.....	Portland, Ore.....	Coke, clay, gen.....	1,963	8,878	6,588
Dochet.....	12 3.05	12 6.50	12 14.28	12 15.50	American.....	Gulf-Pacific Line.....	386.0	52.2	22.40	Houston, Tex.....	Vancouver, B. C.....	General.....	4,700	5,705	4,167
Effra.....	12 3.25	12 7.33	12 15.32	12 16.50	American.....	Tampa Intercoastal Co.....	415.0	55.0	22.0	New Orleans, La.....	Manila, P. I.....	General.....	5,874	6,933	5,182
Adria.....	12 6.40	12 8.30	12 16.19	12 17.15	German.....	Atlantic Tank Rhederei.....	413.0	56.0	18.0	Rouen, France.....	La Libertad, Peaa.....	Ballast.....	6,579	4,574	
San Jose.....	10 20.55	12 14.00	12 21.25	12 22.15	American.....	United Fruit Co.....	330.0	44.6	18.3	Cristobal, C. Z.....	San Francisco, Cal.....	General.....	166	3,675	2,359
Duchessa.....	12 8.40	12 15.00	12 22.38	12 23.40	Italian.....	Nav. Libera Tristina.....	464.0	57.0	16.2	Trieste, Italy.....	Vancouver, B. C.....	General.....	581	8,734	6,144
D'Aosta.....	12 5.00	13 1.40	13 9.26	13 17.40	American.....	N. O. & S. A. S. S. Co.....	324.0	46.2	16.3	New Orleans, La.....	Talcahuano, Chile.....	General.....	1,197	3,981	2,600
Nosa Queen.....	13 3.25	13 4.40	13 12.13	13 14.00	British.....	American Oriental Line.....	422.0	57.0	20.6	New Orleans, La.....	Shanghai, China.....	General.....	4,472	7,249	5,108
Lindbank.....	10 20.15	13 9.55	13 17.43	13 21.15	Colombian.....	National Navigation Co.....	116.0	21.1	9.0	Cristobal, C. Z.....	Buenaventura, Col.....	General.....	147	211	124
Caldas.....	13 3.40	13 10.15	13 17.19	13 18.10	Chilean.....	Cia. Sud. Amer. de Vap.....	422.8	56.2	24.0	New York, N. Y.....	Valparaiso, Chile.....	General.....	1,325	7,764	4,705
Aconagua.....	13 1.40	13 11.25	13 18.40	13 23.53	British.....	Pacific Steam Nav. Co.....	420.5	54.2	22.11	Hull, England.....	Corral, Chile.....	General.....	4,407	7,139	4,040
Laquina.....	7 22.35	13 15.10	13 23.47	14 1.25	Norwegian.....	Panama Mail S. S. Co.....	214.0	34.2	9.10	Cristobal, C. Z.....	Acapulco, Salvador.....	Ballast.....	2,133	1,158	722
Helo.....	13 10.05	14 1.30	14 9.08	14 10.08	German.....	Hamburg-Amerikan Line.....	477.0	63.0	20.3	Hamburg, Germany.....	Portland, Ore.....	General.....	2,133	10,277	7,304
Tacoma.....	13 19.35	14 3.05	14 10.24	14 11.30	German.....	Roland Line.....	216.0	32.0	13.6	Cristobal, C. Z.....	Guayaquil, Ecuador.....	General.....	200	1,105	698
Cal.....	13 21.30	14 4.40	14 12.53	14 14.40	Japanese.....	Osaka Shosen Kaisha.....	415.0	55.0	25.2	New York, N. Y.....	Shanghai, China.....	Phosphates.....	6,936	7,273	5,294
Arrun Maru.....	13 16.35	14 6.03	14 14.50	14 15.00	British.....	Shaw, Savill & Albion.....	500.4	63.0	28.0	London, England.....	Auckland, N. Z.....	General.....	3,766	13,592	9,383
Tamara.....	13 16.35	14 6.03	14 14.50	14 15.00	British.....	DuPont & Co.....	379.0	51.0	15.3	Norfolk, Va.....	Tecapilla, Chile.....	Ballast.....	5,361	3,939	
Grelstone.....	14 8.40	14 8.55	14 16.28	14 17.45	British.....	United Fruit Co.....									
Scottish.....	14 9.50	14 10.05	14 17.58	15 2.15	British.....	Anglo-Saxon P&T Co.....	441.0	57.0	17.6	Rouen, France.....	Los Angeles, Calif.....	Ballast.....	7,571	4,840	
Chief.....	14 7.15	14 13.45	14 22.38	14 23.55	French.....	Messageries Maritimes.....	352.0	52.6	26.9	Dunkirk, France.....	Noumea, N. Calid.....	Iron, wires, gen.....	3,434	5,580	3,797
Asrolabe.....	14 7.15	14 13.45	14 22.38	14 23.55	French.....	U. S. Navy.....				Cristobal, C. Z.....	Gatun, C. Z.....	Ballast.....			
Motlor Sailor.....	14 7.15	14 13.45	14 22.38	14 23.55	American.....	United Fruit Co.....				Gatun Lake, C. Z.....	Balboa, C. Z.....	Ballast.....			9
Mary Ann.....	14 7.15	14 13.45	14 22.38	14 23.55	American.....	United Fruit Co.....									

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Ionic.....	8 11.05	8 11.53	8 20.00	8 23.48	British.....	Shaw, Savill & Albion.....	500.3	63.3	26.3	Wellington, N. Z.....	London, England.....	Frozen, general.....	2,900	12,872	9,577
San Vincente.....	8 11.05	8 12.10	8 20.30	8 22.55	American.....	Quaker Line.....	410.5	54.3	25.0	Portland, Ore.....	Wilmington, Del.....	Lumber, general.....	6,670	6,572	4,900
West Ira.....	8 13.00	8 13.45	8 21.50	8 21.50	American.....	McCormick S. S. Co.....	410.5	54.2	25.0	Seattle, Wash.....	Buenos Aires, Arg.....	General.....	5,527	6,753	5,011

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.		
City of San Francisco ⁸	8	9.55	8	19.26	9	5.45	11	4.50	American	Panama Mail S. S. Co.	296.1	45.9	17.5	San Francisco, Cal.	Cristobal, C. Z.	(¹⁰)	1,451	3,848	2,606
Willapo ⁸	8	18.50	8	19.54	9	6.55	9	6.55	American	Amer.-Hawaiian Line.	415.1	55.7	28.0	Seattle, Wash.	Baltimore, Md.	General	9,203	7,731	5,805
Hanley ⁸	8	20.50	9	6.49	9	15.05	9	15.05	American	Amey S. S. Co.	440.0	56.0	27.0	Everett, Wash.	Baltimore, Md.	Lumber	9,555	8,310	6,005
Puero Star ⁸	9	6.00	9	7.35	9	20.35	9	23.10	British	Blue Star Line, Ltd.	449.5	58.2	24.0	N. Westminster, B. C.	Newcastle, Eng.	Frozen, general.	5,056	8,336	5,404
Flomar ⁸	9	14.10	9	15.02	9	23.15	9	23.15	American	Calmar Line, Inc.	410.0	54.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber	7,363	6,604	4,655
Sealand ⁸	9	8.50	9	16.04	10	18.45	10	18.45	Swedish	Ore S. S. Corp.	561.1	72.2	34.0	Cruz Grande, Chile	Sparrows Pt., Md.	Iron ore.	21,160	15,424	4,421
Herman F. Whiton ⁸	9	17.50	9	18.43	10	4.25	10	5.40	American	A. C. Dutton Lumber Co.	409.8	54.2	24.4	Tacoma, Wash.	Poughkeepsie N. Y.	Lumber	7,240	6,581	4,784
Nore ⁸	9	19.20	10	6.02	10	20.30	11	5.00	Norwegian	Anglo-Saxon Pet. Co.	460.5	59.5	24.0	Los Angeles, Calif.	Land End, Eng.	Gasoline	9,740	8,297	5,572
San Jose ⁸	9	16.50	10	6.29	10	20.55	11	5.00	American	United Fruit Co.	330.0	44.6	19.0	San Francisco, Cal.	Cristobal, C. Z.	(¹¹)	954	3,675	2,359
Caldas ⁸	9	20.35	10	6.32	10	20.15	11	5.00	Colombian	National Navigation Co.	116.0	21.1	10.2	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	189	211	124
Vancouver ⁸	10	2.00	10	7.30	10	18.05	11	3.50	German	Hamburg-American Line	499.6	62.1	28.0	Vancouver, B. C.	Hamburg, Germany	General	7,906	10,267	7,252
Columbian ⁸	10	4.56	10	8.24	10	21.35	10	21.45	American	Amer.-Hawaiian Line	420.0	54.0	26.0	Portland, Ore.	Boston, Mass.	General	5,661	6,760	4,450
Narenta ⁸	10	6.40	10	9.27	10	22.50	11	11.50	British	Pacific Steam Nav. Co.	480.0	58.2	25.0	N. Westminster, B. C.	Hamburg, Germany	General	5,876	8,856	6,559
Comet ⁸	9	19.15	10	9.55	11	00.15	11	6.40	American	Standard Oil Co., N. Y.	450.5	66.0	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	13,067	9,820	6,750
Geisha ⁸	10	6.30	10	10.41	11	2.35	11	8.15	Norwegian	Knut Knutsen.	375.8	51.4	24.0	Super, Peru.	English Channel ⁹	General	6,136	5,681	3,925
Pacific President ⁸	10	8.30	10	11.54	11	3.25	11	3.25	British	Furness-Pacific Line	450.4	60.8	28.0	Vancouver, B. C.	Glasgow, Scotland.	General	8,815	10,086	7,226
Chateau Thierry ⁸	10	2.24	10	14.51	10	23.30	11	14.05	American	U. S. Army	448.0	56.0	24.0	Honolulu, T. H.	New York, N. Y.	General	108		
Gracia ⁸	10	18.40	10	19.41	11	5.40	11	12.00	British	Donaldson Bros., Ltd	415.6	54.3	27.0	Vancouver, B. C.	Glasgow, Scotland	General	6,245	6,809	4,842
Triumph ⁸	10	18.25	11	6.30	11	17.00	11	23.00	American	Roosevelt S. S. Co.	456.1	56.0	27.0	Davao, P. I.	New York, N. Y.	General	8,859	8,278	5,839
Witell ⁸	10	22.30	11	6.42	11	17.55	11	17.30	German	North German Lloyd	469.8	58.2	25.0	Vancouver, B. C.	Bremen, Germany	General	7,698	7,816	5,755
Horace Luckenbach ⁸	11	4.15	11	7.20	11	18.45	11	18.45	American	Luckenbach Line.	445.0	58.0	26.0	Portland, Ore.	Boston, Mass.	General	7,293	8,699	6,363
Cal ⁸	11	9.55	11	10.48	11	19.35	11	19.35	German	Roland Line.	216.5	32.9	12.4	Guayaquil, Ecuador	Cristobal, C. Z.	General	335	1,105	698
Tuscaloosa City ⁸	11	15.00	11	15.48	11	23.30	11	23.30	American	Ishihara S. S. Lines	442.0	56.0	25.0	Seattle, Wash.	Baltimore, Md.	(¹²)	7,040	7,611	5,450
Salvador ⁸	11	15.30	11	18.34	12	1.40	12	1.40	British	Pacific Steam Nav. Co.	215.0	33.5	14.0	Champerico, Guatemala	Cristobal, C. Z.	(¹³)	369	1,270	735
Columbia ⁸	11	13.55	12	6.16	12	14.45	13	11.54	American	Panama Mail S. S. Co.	380.0	48.7	24.0	San Francisco, Cal.	New York, N. Y.	General	2,564	6,015	4,281
Asia ⁸	12	5.00	12	6.34	12	14.45	13	12.33	German	Hamburg-American Line	438.2	55.3	24.0	Valparaiso, Chile	Hamburg, Germany	(¹⁴)	7,484	7,286	5,174
Tolton ⁸	12	5.00	12	7.30	12	15.20	12	15.20	Chilean	South American S. S. Co	421.0	56.0	26.0	Valparaiso, Chile	New York, N. Y.	Nitrates	8,301	7,384	5,459
David McKelvey ⁸	12	6.45	12	8.53	12	20.05	12	20.05	American	Tidewater Oil Co.	430.0	59.2	25.0	Pt. San Luis, Calif.	New York, N. Y.	Gasoline	8,302	7,629	5,325
Norne ⁸	12	5.30	12	9.14	12	19.00	12	21.20	Norwegian	H. Kuhnle	350.7	50.8	24.0	Noumea, N. Calid.	Baltimore, Md.	Chrome ore	6,594		
Havana Maru ⁸	12	10.20	12	11.08	12	20.40	12	20.40	Japanese	Osaka Shosen Kaisha	407.2	50.8	19.0	Keelung, Japan	New York, N. Y.	General	2,338	6,538	4,769
Vancouver City ⁸	12	12.25	12	13.20	12	21.40	12	21.40	British	Reardon Smith Line	415.6	55.0	25.0	Vancouver, B. C.	Manchester, Eng.	General	7,376	7,272	5,494

⁸ Motor ship.

⁹ For orders.

¹⁰ Coffee, logs, hides, and gasoline.

¹¹ Nitrates, copper, and general.

¹² Coffee, specie, and hides.

¹³ Coffee, kerosene, coffee, and general.

¹⁴ Beans, flour, hay, canned goods, pulp, and lumber.

⁸ Motor ship.⁹ For orders.¹⁰ Coffee, logs, hides, and gasoline.¹¹ Nitrates, copper, and general.¹² Coffee, specie, and hides.¹³ Tanker.¹⁴ Beans, flour, hay, canned goods, pulp, and lumber.

Japan Arrow ¹	12 13.05	12 14.06	12 22.45	12 22.45	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	Providence, R. I.	Gaoline.	11,265	10,094	7,388
Musician.	12 18.30	13 6.10	13 16.10	13 21.30	British	T. & J. Harrison	384.3	52.0	22.0	N. Westminster, B. C.	Liverpool, England	General	6,213	5,212	3,598
Zealandic ²	12 1.22	13 7.15	13 16.20	13 18.20	British	Shaw, Savill & Albion.	482.0	64.0	25.3	Honolulu, N. Z.	London, England	Frozen, general.	6,676	11,819	8,367
Tusitala ²⁵	12 22.00	13 7.50			American	Ship Tusitala, Inc.	261.0	39.0	21.0		New York, N. Y.	Raw sugar.	2,380	1,802	1,646
Edgar F.	13 14.10	13 14.49	13 22.05	13 22.05	American	Luckenbach Line.	425.0	57.3	29.0	Portland, Ore.	Mobile, Ala.	General	7,517	8,508	6,648
Munmysic.	13 15.45	13 16.52	14 00.05	14 00.05	American	Nunson, McCork Line.	400.7	54.2	23.0	Tacoma, Wash.	Baltimore, Md.	Lumber	7,205	6,623	4,668
Dakotan.	13 16.20	13 17.09	14 1.45	14 2.45	American	Amer-Hawaiian Line.	407.7	53.7	27.0	Seattle, Wash.	Boston, Mass.	General	7,458	7,156	5,094
Oropesa.	14 1.07	14 8.19	14 16.00	14 20.05	British	Pacific Steam Nav. Co.	530.0	66.0	28.0	Coronel, Chile.	Liverpool, England	General	7,966	14,827	10,630
Canadian															
Planter.	14 10.00	14 10.43	13 19.05	14 22.28	British	Can. Nat. Steamships.	400.0	52.4	22.4	Vancouver, B. C.	Halifax, N. S.	Lumber	5,992	5,858	4,108
Abron.	14 11.45	14 11.56	14 19.40	14 19.40	American	Swayne & Hoyt.	386.8	52.2	17.0	Portland, Ore.	Mobile, Ala.	General	2,434	5,732	4,131
Aspley Hall.	14 13.00	14 13.45	14 21.20	14 21.20	British	Inter-Freighting Corp.	405.1	52.6	25.0	Antofagasta, Chile.	Mobile, Ala.	Nitrates	7,900	5,871	4,351
Tal ²⁶	14 16.28	14 16.28	14 23.15	14 23.15	American	U. S. Navy.				Balboa, C. Z.	Cristobal, C. Z.	Ballast.			

¹ Tanker. ²⁵ Sail boat. ²⁶ Tug. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 8.	Pastores	United Fruit Co.	Port Limon, Costa Rica.	March 8.	No. 9685 ¹⁸ .	Pan American Airways	San Salvador and waypts.
March 8.	Inapaquina ¹⁷ .	A. Tagaropulos	Colon, Rep. of Panama.	March 8.	No. 144-M ¹⁸	Pan American-Grace Airways	Talara via wayports.
March 9.	Statendam.	Holland-America Line.	New York via wayports.	March 8.	No. 669-M ¹⁸	Pan American Airways	Miami via wayports.
March 9.	Darien C-35 ¹⁸ .	Seadta Airplane Co.	Baranquilla and wayports.	March 8.	Pastores	United Fruit Co.	New York via Habana.
March 10.	Pullux.	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	March 8.	Cartago	United Fruit Co.	New Orleans and waypts.
March 10.	Galicia.	Hamburg-American Line	Hamburg via wayports.	March 8.	Colombia.	Royal Netherland S. S. Co.	Port Limon, Costa Rica.
March 10.	No. 9685 ¹⁸ .	Pan American Airways	San Salvador and waypts.	March 10.	Statendam.	Holland-America Line.	New York via wayports.
March 10.	No. 144-M ¹⁸	Pan American Airways	Talara via wayports.	March 11.	No. 9604 ¹⁸ .	Pan American Airways	San Salvador and waypts.
March 11.	Cristobal.	Panama R. R. S. S. Line.	New York via Haiti.	March 11.	No. 670-M ¹⁸ .	Galicia	San Salvador and waypts.
March 11.	Carare.	Elders & Fyffes Line.	Avonmouth via wayports.	March 11.	Galicia	Pan American-Grace Airways	Miami via wayports.
March 11.	Ulua.	United Fruit Co.	New York via Habana.	March 11.	Carare	Hamburg-American Line.	Tampico via wayports.
March 11.	Reliance.	Hamburg-American Line	New York via wayports.	March 12.	Tela.	Elders & Fyffes Line.	Avonmouth via wayports.
March 11.	No. 300-N ¹⁸	Pan American-Grace Airways	New Orleans, La.	March 12.	No. 145-M ¹⁸ .	United Fruit Co.	Bocas, Rep. of Panama.
March 11.	No. 668-M ¹⁸	United Fruit Co.	Miami via wayports.	March 12.	Pullux.	Pan American Airways	Caracas via wayports.
March 11.	No. 9688 ¹⁸ .	Leyland S. S. Line.	Liverpool via wayports.	March 12.	Sixaola.	United Fruit Co.	Aruba, D. W. I.
March 11.	Pan American Airways	Pan American Airways	Miami via wayports.	March 12.	Davision	Leyland S. S. Line	New York via wayports.
March 12.	Pearl Marie ¹⁹	G. I. Bryan.	San Salvador and waypts.	March 12.	Ulua	United Fruit Co	Port Limon, Costa Rica.
March 12.	C. C. Acme ²⁰	R. Foster.	Colon, Rep. of Panama.	March 12.	Pearl Marie ¹⁹	G. I. Bryan.	Bluefields, Nicaragua.
March 12.	Austvagen	Aluminium Line	Cartagena, Colombia.	March 12.	Reliance	Hamburg-American Line	New York via wayports.
March 12.	Martinique.	Colombian S. S. Line.	New Orleans, La.	March 13.	Darien C-35 ¹⁸ .	Seadta Airplane Co.	Baranquilla and waypts.
March 13.	Cefalu.	Standard Fruit & S. S. Co.	Cartagena, Colombia.	March 13.	Austvagen	Aluminium Line	Cartagena and wayports.
March 13.	Esfuero ¹⁹ .	J. Armussen.	New Orleans and Habana.	March 13.	Martinique	Colombian S. S. Line	New York via Kingston.
March 13.	Estuero ¹⁹ .	Bluefields, Nicaragua.	Port Limon, Costa Rica.	March 14.	Annetta I ¹⁷ .	A. Tagaropulos	Colon, Rep. of Panama.
March 13.	Esfuero ¹⁹ .	Royal Netherlands S. S. Co.	Bocas, Rep. of Panama.	March 14.	Carmelia ¹⁹	Standard Fruit & S. S. Co	Colon, Rep. of Panama.
March 14.	Tela.	United Fruit Co.	Colon, Rep. of Panama.	March 14.	C. C. Acme ²⁰	C. C. Acme	San Andres, Colombia.
March 14.	Repubic.	United States Lines	Philadelphia via waypts.	March 14.	Tela.	R. Foster	San Andres, Colombia.
				March 14.	Cefalu.	United Fruit Co.	New Orleans and waypts.
						Standard Fruit & S. S. Co.	New Orleans and waypts.

¹⁷ Motor boat. ¹⁸ Air mail carrier. ¹⁹ Motor schooner. ²⁰ Schooner.

Other than ships passing through the Canal.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.		
* ARRIVALS.							
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 14.	No. 145-M ²¹	Pan American Airways	Curacao, D. W. I.				
March 14.	No. 670-M ²¹	Pan American Airways	Miami via wayports.				
March 14.	No. 9664 ²¹	Pan American Airways	San Salvador and waypts				
March 14.	No. 300-N ²¹	Pan American-Grace Airways	Talara via wayports.				
March 14.	Heredia	United Fruit Co.	New Orleans via Habana.				
March 14.	Carmelita ²²	Standard Fruit & S. Co.	Colon, Rep. of Panama.				
March 14.	Annetta I. ²³	A. Tagaropoulos.	Colon, Rep. of Panama.				
PORT OF BALBOA.							
²¹ Air mail carrier.	²² Motor schooner.	²³ Motor boat.					
March 8.	Nora ¹	Arrow Oil Co.	Los Angeles, Calif.	March 10.	Nora ¹	Arrow Oil Co.	Los Angeles, Calif.
March 9.	Real ²⁴	Hans Elliot.	Panama Bay, R. P.	March 10.	Real ²⁴	Hans Elliot.	Panama Bay, R. P.
March 10.	Supreme ²⁵	Van Camp Seafood Co.	Panama Bay, R. P.	March 10.	Supreme ²⁵	Van Camp Seafood Co.	Panama Bay, R. P.
March 11.	Supreme ²⁵	Van Camp Seafood Co.	Panama Bay, R. P.	March 11.	Supreme ²⁵	Van Camp Seafood Co.	Panama Bay, R. P.
March 11.	Rancagua ¹	Chilean Navy.	Valparaiso, Chile.	March 13.	Rancagua ¹	Chilean Navy.	San Diego, Calif.
March 11.	La Placencia ¹	Union Oil Co. of California	Los Angeles, Calif.	March 13.	La Placencia ¹	Union Oil Co. of California	Los Angeles, Calif.
March 14.	City of San Francisco ²⁵	Panama Mail S. S. Co.	Buenaventura, Colombia.	March 15.	City of San Francisco ²⁵	Panama Mail S. S. Co.	San Francisco, Calif.

* Other than ships passing through the Canal.

¹ Tanker.²⁴ Motor schooner.²⁵ Motor ship.

Commercial Traffic Through the Panama Canal in February, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of February, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for February, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	63	352,531	266,032	430,539	265,614	\$303,564.87	158,670
Europe to Canada:							
British.....	11	64,188	43,036	70,469	43,341	49,271.97	14,176
Danish.....	1	5,663	5,188	6,913	5,218	6,485.00	7,855
Dutch.....	1	8,266	6,197	10,220	6,385	7,746.25	3,435
French.....	3	19,091	10,946	21,869	11,974	13,682.50	3,966
German.....	2	13,409	8,864	14,905	8,992	11,080.00	6,965
Italian.....	1	5,962	4,354	7,061	4,460	5,442.50	1,083
Norwegian.....	2	11,527	8,126	13,074	8,213	10,157.50	9,338
Swedish.....	2	10,404	6,296	10,318	7,911	7,870.00	6,876
Total.....	23	138,510	93,007	154,829	96,494	111,735.72	53,694
United States to South America:							
British.....	2	9,459	7,880	13,882	7,702	7,413.17	1,626
Chilean.....	2	9,202	7,304	13,615	8,078	9,130.00	1,553
Danish.....	1	4,936	2,801	4,617	2,782	3,501.25	2,701
Japanese.....	1	4,409	4,364	5,860	4,260	3,273.00	.....
Norwegian.....	1	4,513	3,530	5,659	3,533	4,412.50	3,500
Swedish.....	1	4,421	3,743	15,339	4,377	3,183.12	.....
United States.....	12	44,868	35,470	64,873	35,431	36,180.74	9,217
Total.....	20	81,808	65,092	123,845	66,163	67,093.78	18,602
United States to Far East:							
British.....	5	28,307	18,094	30,899	18,201	22,617.50	22,079
Japanese.....	6	32,234	26,680	41,073	26,259	33,350.00	27,327
Norwegian.....	2	8,770	4,954	8,565	4,941	6,192.50	8,550
Panamanian.....	1	6,955	3,659	6,856	3,659	4,573.75	2,187
United States.....	3	16,805	11,764	18,979	11,748	14,705.00	21,306
Total.....	17	93,071	65,151	106,372	64,808	81,438.75	81,449
Europe to South America:							
British.....	5	31,527	24,566	42,421	25,800	30,605.47	8,425
Danish.....	2	9,296	5,649	9,527	5,748	7,061.25	6,163
French.....	1	4,854	3,224	5,399	3,225	4,030.00	1,101
German.....	4	21,581	15,654	24,488	14,855	19,567.50	8,040
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	2,286
Norwegian.....	1	4,321	3,748	6,361	3,769	3,111.12	.....
Total.....	14	80,908	58,017	99,914	60,177	70,845.34	26,015
Europe to Australasia:							
British.....	10	62,930	43,351	72,163	44,755	52,952.12	42,595
Swedish.....	1	6,190	3,278	5,841	4,083	4,097.50	2,205
Total.....	11	69,120	46,629	78,004	48,838	57,049.62	44,800
Europe to United States:							
British.....	2	9,230	7,691	12,694	7,546	6,645.60	.....
Dutch.....	1	6,210	5,298	8,156	4,898	4,471.20	.....
French.....	1	5,050	4,356	7,011	3,989	3,636.00	.....
Italian.....	1	4,421	3,764	6,107	3,883	3,183.12	.....
Norwegian.....	3	13,917	10,997	18,157	10,956	10,186.72	4,195
United States.....	2	13,353	10,971	17,633	10,897	11,136.93	8,327
Total.....	10	52,181	43,077	69,758	42,169	39,259.57	12,522
Foreign vessels in ballast— United States intercoastal:							
British.....	1	5,513	4,783	9,069	4,430	3,969.36	.....
Danish.....	2	9,815	5,449	9,220	5,603	6,811.25	.....
Japanese.....	1	5,979	5,121	8,151	3,037	4,304.88	.....
Norwegian.....	2	8,059	4,932	8,079	4,933	5,677.37	.....
Swedish.....	2	8,954	5,329	9,170	6,642	6,446.88	.....
Total.....	8	38,320	25,614	43,689	24,645	27,209.74	.....

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal to United States:							
British.....	1	4,543	3,999	6,499	4,052	\$3,270.96	.....
United States.....	7	14,852	11,525	19,330	11,425	10,851.50	1,252
Total.....	8	19,395	15,524	25,829	15,477	14,122.46	1,252
Cristobal to South America:							
Colombian.....	3	446	437	673	441	527.65	473
Dutch.....	1	742	294	780	325	367.50	27
German.....	4	3,491	2,260	4,347	2,334	2,825.00	441
Total.....	8	4,679	2,991	5,800	3,100	3,720.15	941
United States to Australasia:							
British.....	4	25,945	17,492	27,964	17,531	21,865.00	8,607
Norwegian.....	2	13,104	7,534	13,341	7,701	9,417.50	3,113
Total.....	6	39,049	25,026	41,305	25,232	31,282.50	11,720
United States to Canada:							
Norwegian.....	2	8,492	4,925	8,340	4,962	6,156.25	6,346
Swedish.....	1	5,199	4,148	6,864	4,997	3,743.28	.....
United States.....	2	10,689	7,307	11,844	7,251	9,133.75	11,984
Total.....	5	24,380	16,380	27,048	17,210	19,033.28	18,330
United States to Philippine Islands:							
Danish.....	1	5,523	3,091	5,086	3,168	3,863.75	4,400
United States.....	1	5,747	5,331	6,901	5,322	6,663.75	5,038
Total.....	2	11,270	8,422	11,987	8,490	10,527.50	9,438
Canada to Australasia:							
British.....	2	9,896	7,660	12,548	7,673	9,575.00	4,959
South America to Canada:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	3,959
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	3,753
Total.....	2	10,120	6,423	10,434	6,521	8,028.75	7,712
Cristobal to Central America:							
British.....	1	735	648	1,128	650	810.00	532
Norwegian.....	1	722	651	990	569	519.84	.....
Total.....	2	1,457	1,299	2,118	1,219	1,329.84	532
Around the world:							
United States.....	2	18,461	12,538	20,997	12,538	15,672.50	7,985
United States to Hawaii:							
British.....	1	6,379	5,290	8,940	5,229	4,592.88	.....
United States to Balboa:							
United States.....	1	332	320	662	320	240.00	.....
Central America to Balboa:							
United States.....	1	966	707	1,309	691	695.52	.....
Central America to South America:							
Colombian.....	1	124	113	207	109	141.25	249
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,476
Europe to Central America:							
Danish.....	1	3,531	2,384	3,953	2,394	2,980.00	2,300
West Indies to United States:							
United States.....	1	6,050	5,140	8,207	5,092	4,356.00	.....
West Indies to Canada:							
Norwegian.....	1	4,134	3,214	5,242	3,264	4,017.50	480
West Indies to Balboa:							
British.....	1	.....	.....	.....	.....	18,320.00	.....
Grand total, February, 1931..	212	1,072,493	780,220	1,300,803	787,854	912,045.02	465,126
Grand total, February, 1930..	257	1,258,677	938,452	1,561,155	945,123	1,083,993.81	795,413
Grand total, February, 1929..	277	1,293,704	987,172	1,629,408	994,588	1,119,089.89	864,344

* Naval vessel of 36,640 displacement tons.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	67	358,777	276,804	445,065	276,328	\$345,666.03	500,764
Canada to Europe:							
Belgian.....	1	5,595	3,693	5,852	3,613	4,616.25	8,217

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canada to Europe—Continued:							
British.....	20	99,568	69,543	112,550	69,747	\$86,928.75	143,070
Danish.....	2	13,924	10,406	16,109	10,491	13,007.50	22,167
Dutch.....	3	21,230	16,418	26,388	16,418	20,522.50	27,386
French.....	2	11,956	7,106	13,518	7,535	8,882.50	14,215
German.....	4	24,191	15,113	25,660	15,661	18,891.25	29,496
Italian.....	2	15,853	12,299	20,008	12,480	15,373.75	18,759
Norwegian.....	1	6,140	5,261	8,513	5,339	6,576.25	7,483
Swedish.....	2	10,521	6,187	10,602	7,985	7,733.75	12,693
United States.....	1	5,188	3,856	6,194	3,845	4,820.00	8,022
Total.....	38	214,166	149,882	245,385	153,114	187,352.50	291,508
South America to United States:							
British.....	8	37,818	29,789	50,456	30,842	37,236.25	74,047
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,084
Danish.....	2	9,325	5,456	9,025	5,491	6,820.00	15,960
Japanese.....	1	4,409	4,364	5,860	4,260	5,290.80	7,958
Norwegian.....	2	7,981	5,328	8,910	5,429	6,660.00	14,063
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	11	46,396	36,485	65,835	36,461	45,093.15	93,887
Total.....	27	119,551	92,374	178,072	95,221	114,790.20	253,795
South America to Europe:							
British.....	3	16,417	12,764	20,688	12,923	15,955.00	19,197
Dutch.....	1	5,806	3,602	5,789	3,289	4,502.50	7,046
French.....	2	9,316	8,534	12,544	8,525	10,534.55	14,896
German.....	5	24,968	17,023	28,424	16,607	21,278.75	37,540
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,436
Norwegian.....	1	3,930	3,137	5,128	3,129	3,921.25	6,037
Swedish.....	2	7,427	5,884	10,374	7,448	7,355.00	14,340
Total.....	15	75,380	56,458	94,950	57,979	70,439.55	100,492
United States to Europe:							
Belgian.....	1	4,976	4,568	7,138	3,988	5,710.00	9,200
British.....	5	23,490	18,576	30,012	18,741	23,220.00	33,787
Danish.....	1	5,317	4,219	6,645	4,244	5,273.75	9,056
German.....	1	6,656	4,840	7,915	4,883	6,050.00	9,163
Norwegian.....	5	22,959	16,055	26,746	15,785	20,068.75	37,987
United States.....	1	6,020	4,821	7,583	4,826	6,026.25	10,035
Total.....	14	69,418	53,079	86,039	52,467	66,348.75	109,228
Philippine Islands to United States:							
Danish.....	2	6,663	4,219	7,119	4,280	5,273.75	11,650
Japanese.....	4	20,144	17,876	25,412	17,791	22,188.90	31,265
Norwegian.....	1	4,538	2,477	4,116	2,454	3,096.25	7,000
Panamanian.....	1	6,967	3,622	6,801	3,622	4,512.50	6,109
United States.....	2	9,824	8,327	10,921	7,316	10,291.85	15,428
Total.....	10	48,136	36,521	54,369	35,463	45,363.25	71,452
South America to Cristobal:							
Colombian.....	4	570	550	880	550	668.90	916
Dutch.....	2	1,484	588	1,560	646	735.00	556
German.....	4	3,491	2,260	4,347	2,334	2,825.00	1,640
Total.....	10	5,545	3,398	6,787	3,530	4,228.90	3,112
Australasia to Europe:							
British.....	8	68,225	48,374	79,516	49,776	60,467.50	50,409
United States to Cristobal:							
British.....	1	4,543	3,999	6,499	4,052	4,998.75	8,723
United States.....	6	13,303	10,358	17,356	10,263	12,947.50	7,046
Total.....	7	17,846	14,357	23,855	14,315	17,946.25	15,769
Central America to Cristobal:							
British.....	3	3,028	2,568	4,831	2,715	3,210.00	1,086
Norwegian.....	1	722	579	990	569	723.75	939
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	1,549
Total.....	5	5,299	4,314	7,795	4,445	5,392.50	3,574
Far East to United States:							
Japanese.....	3	18,905	14,824	23,971	14,567	18,530.00	15,051
Canada to United States:							
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	7,200
Norwegian.....	2	9,968	5,403	9,065	5,417	6,753.75	14,407
Total.....	3	14,435	8,093	13,538	8,154	10,116.25	21,607

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Australasia to Canada:							
British	3	13,829	10,959	18,080	11,089	\$13,698.75	4,008
Central America to Europe:							
German	2	4,259	3,058	5,226	3,047	3,822.50	2,970
Canada to South America:							
Norwegian	2	10,506	5,830	9,760	5,993	7,287.50	6,038
United States to India:							
British	1	4,681	2,652	4,351	2,638	3,515.00	2,050
Canadian intercoastal:							
British	1	4,186	3,322	5,465	3,400	4,152.50	6,074
South America to West Indies:							
British	1	4,964	4,136	6,888	4,080	3,574.08	.....
Far East to Europe:							
Norwegian	1	4,265	2,495	4,333	2,494	3,118.75	7,192
Balboa to Cristobal:							
British	* 1	.....	.....	.....	.....	* 18,247.00	.....
Grand total, February, 1931..	219	1,062,373	790,930	1,313,445	798,100	1,003,857.76	1,465,093
Grand total, February, 1930..	234	1,110,578	841,971	1,374,438	839,467	1,047,392.31	1,582,487
Grand total, February, 1929..	245	1,134,826	876,251	1,426,912	879,266	1,092,871.31	1,686,154

* Naval vessel of 36,494 displacement tons.

United States Intercoastal Traffic by Commodities for February, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for February, 1931, and the totals for February, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements	1,284	.....	1,284
Alfalfa .....	.....	888	888
Alfalfa meal .....	.....	696	696
Ammonia	868	.....	868
Asphalt	158	.....	158
Automobiles	2,447	185	2,632
Automobile accessories	620	106	726
Bamboo .....	.....	126	126
Bark, cascara .....	.....	14	14
Barley .....	.....	27	27
Beans	23	8,203	8,226
Borax .....	.....	824	824
Bricks	490	.....	490
Burlap	174	32	206
Calcium carbide	264	30	294
Canned:			
Fish	590	7,036	7,626
Fruit	1,500	29,845	31,345
Meat	58	28	86
Milk	52	322	374
Soup	2,193	40	2,233
Vegetables	179	5,647	5,826
Miscellaneous and unclassified	1,662	7,943	9,605
Carbon black	13	75	88
Celite filtercel .....	.....	170	170
Cement	334	.....	334
Chalk	400	.....	400
Charcoal	141	.....	141
Chemicals	2,159	611	2,770
China and fire clay	173	20	193
Coal	2,073	.....	2,073
Cocoa	133	.....	133

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Coconuts.....	19	194	213
Coffee.....	167	65	232
Coke.....	184		184
Cold storage:			
Cheese.....	132		132
Eggs.....		37	37
Lard.....	86		86
Meat.....	40		40
Other.....	350	271	621
Confectionery.....	904	15	919
Cork.....	76		76
Cotton.....	557	2,183	2,740
Cyanide.....	82		82
Drugs and medicines.....	1,755	70	1,825
Dyes.....	17		17
Dyewoods.....	2		2
Earthenware.....	212	100	312
Explosives.....	76		76
Fertilizer.....	39	99	138
Flour.....	119	6,811	6,930
Fruit:			
Dried.....		8,446	8,446
Fresh.....	79	1,244	1,323
Furniture.....	291	9	300
General.....	31,385	8,090	39,475
Glass and glassware.....	1,669	234	1,903
Glue.....	68	223	291
Granite.....	56		56
Hair.....	12	25	37
Hardwoods.....	757	137	894
Hay.....		1,008	1,008
Hemp.....		392	392
Honey.....		180	180
Hops.....		51	51
Infusorial earth.....		199	199
Ink.....	15		15
Jute.....	84	201	285
Kapok.....		11	11
Lard substitute.....	1,302		1,302
Leather.....	5		5
Lime.....	50		50
Linoleum.....	276	76	352
Liquors.....	101	131	232
Lumber.....	1,568	161,258	162,826
Malt.....	257	28	285
Manufactured goods:			
Iron and steel.....	58,159	771	58,930
Machinery.....	2,254	446	2,700
Railroad material.....	176		176
Tinplate.....	6,806		6,806
Textiles.....	3,256	262	3,498
Miscellaneous.....	9,256	2,342	11,598
Marble.....	26		26
Matches.....	185	25	210
Metals:			
Antimony.....		123	123
Copper.....		2,343	2,343
Iron.....	1,203		1,203
Lead.....	113	897	1,010
Scrap.....	180	80	260
Tin.....		531	531
Zinc.....	13	500	513
Other.....	579		579
Milk, powdered.....	20	564	584
Molasses.....	533		533
Musical instruments.....	45		45
Nitrates.....	105		105
Nuts.....		252	252
Ons.....	83		83
Oils:			
Cottonseed.....	146		146
Gas oil, fuel oil.....	15	38,381	38,396
Gasoline, benzine, naphtha.....	105	153,375	153,480
Kerosene.....		5,845	5,845
Linsed.....	48		48
Lubricating and greases.....	4,112	1,805	5,917
Olive.....	15		15
Vegetable.....	270	52	322
Wood.....	74	21	95
Ores:			
Copper.....		765	765
Magnesite.....	100	50	150
Other.....		100	100
Paint.....	416	348	764
Paper.....	5,877	7,133	13,010

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Paper pulp.....		5,843	5,843
Paper roofing.....	98		98
Peanuts.....	430	771	1,201
Phosphates.....	2,694		2,694
Porcelain.....	142	87	229
Rags.....		107	107
Rice.....	1,494	586	2,080
Rope.....	167	81	248
Rosin.....	685		685
Rubber:			
Manufactured.....	840	225	1,065
Raw.....	42		42
Scrap.....		45	45
Salt.....	285		285
Seeds:			
Grass.....		361	361
Other.....	73	619	692
Shells.....	2,195		2,195
Silk.....		2,316	2,316
Skins and hides.....		2,452	2,452
Slate.....	380		380
Soap.....	2,983	262	3,245
Soda.....	596		596
Soda ash.....	1,082	20	1,102
Soda, bicarbonate.....	172		172
Soda, caustic.....	74		74
Starch.....	86		86
Sugar.....	75	4,167	4,242
Sulphur.....	60	125	185
Syrup.....	188		188
Talc.....		125	125
Tallow.....		11	11
Tar.....	117	222	339
Tea.....		25	25
Tobacco.....	1,023	132	1,155
Turpentine.....	38		38
Vegetables.....	49	37	86
Waste.....	26	65	91
Wax.....	33		33
Wheat.....		520	520
Wine.....		195	195
Wool.....	120	1,376	1,496
Zinc oxide.....	52		52
Total, February, 1931.....	171,229	492,442	663,671
Total, February, 1930.....	239,526	476,970	716,496
Total, February, 1929.....	258,944	539,256	798,200

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 11, 1931.

No. 853.

Panama, Panama Bay, Perlas Islands, spar buoy established. The commanding officer of the U. S. S. *Argonne*, has reported by radio the establishment of a spar buoy as follows:

A spar buoy with black and red horizontal stripes was planted to mark the shoal spot one mile east of Punta de Cocos, Bahia Santelmo, Isla del Rey, in the Perlas Group. The buoy was planted with right tangent Isla Santelmo bearing $43\frac{1}{2}$ degrees true and right tangent Galera Island bearing $107\frac{1}{2}$ degrees true.

H. BURGESS,
Governor.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at $14\frac{1}{2}$ cents per pound and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., March 25, 1931. No. 34.

CANAL WORK IN FEBRUARY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of February, 1931.

BALBOA HEIGHTS, C. Z., March 17, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of February, 1931:

NUMBER OF TRANSITS.

During the month, 431 commercial vessels and 2 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 86 vessels belonging to the United States Government, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 522 transits for the month, or a daily average on all traffic of 18.64. The majority of the United States Government vessels were units of the Scouting Fleet transiting from the Atlantic to the Pacific to participate in the combined fleet maneuvers in and beyond Panama Bay.

Tolls on the 431 commercial vessels amounted to \$1,915,902.78, and on the launches to \$13.08, or a total of \$1,915,915.86, or a daily average on all traffic of \$68,425.57.

In comparison with February, 1930, traffic for the past month declined 12.2 per cent in the number of transits and 10.1 per cent in tolls. In comparison with January, 1931, a decrease of 9.5 per cent in transits and 9.1 per cent in tolls occurred, although the daily average of 15.39 commercial transits and \$68,425.10 in tolls, was slightly higher than in January. In comparison with the first 8 months of the fiscal year 1930, the corresponding period this year has had 415 fewer transits and \$1,398,419.21 less tolls, decreases of 9.8 per cent and 7.6 per cent, respectively.

The total number of craft of all kinds transiting the Canal during the month of February in the two preceding years and in 1931 are shown in the following tabulation:

	February, 1929.	February, 1930.	February, 1931.
Commercial vessels.....	522	491	431
Lauches (under 20 tons).....	23	3	2
Noncommercial vessels:			
United States Government.....	55	73	86
Panamanian Government.....	2	1	.....
For repairs.....	4	4	3
Total.....	606	572	522

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	7	8	15
Pedro Miguel.....	17	18	35
Miraflores.....	18	20	38

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the

Canal each month from the beginning of the fiscal year 1931 to the end of February, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July . . .	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August . .	541	465	2,558,730	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September .	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October . .	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November .	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December .	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January . .	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February . .	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
Total . .	4,224	3,809	20,218,789	19,043,902	20,606,415	17,471,748	18,320,231.52	16,921,812.31

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for February in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	February, 1929.	February, 1930.	February, 1931.	Average per month for calendar year 1930.
Number of vessels	522	491	431	490
Panama Canal net tonnage	2,428,530	2,369,255	2,134,866	2,438,406
United States net tonnage	1,863,423	1,780,423	1,571,150	1,826,376
Registered gross tonnage	3,056,320	2,935,593	2,614,248	3,025,071
Registered net tonnage	1,873,854	1,784,590	1,585,954	1,839,006
Tolls	\$2,211,961.20	\$2,131,386.12	\$1,915,902.78	\$2,178,835.41
Tons of cargo carried	2,550,498	2,377,900	1,930,219	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	February, 1929.	February, 1930.	February, 1931.	
Number of transits	18.64	17.54	15.39	16.12
Panama Canal net tonnage	86,733	84,616	76,245	80,167
Tolls	\$78,998.62	\$76,120.93	\$63,425.10	\$71,632.95
Tons of cargo carried	91,089	84,925	68,936	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of February, 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	February, 1929.	February, 1930.	February, 1931.
Panama Canal net tonnage	4,652	4,825	4,953
United States net tonnage	3,570	3,626	3,645
Registered gross tonnage	5,855	5,979	6,066
Registered net tonnage	3,590	3,635	3,680
Tolls	\$4,237.47	\$4,340.91	\$4,445.25
Tons of cargo (including vessels in ballast)	4,836	4,843	4,478
Tons of cargo (laden vessels only)	5,890	5,730	5,347

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in February, 1931. Vessels of United States registry, with 185, led in the number of transits, while those flying the British flag, with 102, were second. Vessels of these two nationalities made up 66.6 per cent of the total transits for the month. Vessels of Norwegian and German registry were next with 33 and 26 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of February, 1931, aggregating 1,930,219 tons, was the lowest month's cargo tonnage through the Canal since September, 1925, when 1,891,988 tons were passed through. Cargo from the Atlantic to the Pacific totaled 465,126 tons, as compared with 562,832 tons in the previous month, and 795,413 tons in February, 1930. The cargo in this direction for February, 1931, was the lightest since February, 1922, when 442,825 tons were transited. From the Pacific to the Atlantic there were 1,465,093 tons, as compared with 1,544,105 tons in January, 1931, and 1,582,487 tons in February, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 137,158 tons, constituted the heaviest item of cargo, followed by cotton with 28,056 tons, slag with 25,817 tons, phosphates with 19,382 tons, mineral oils with 18,456 tons, and cement with 17,670 tons. There was a decrease of 330,287 tons, or 41.5 per cent, in cargo moving in this direction as compared with February, 1930, owing to a general decline in shipments of practically all the leading commodities normally routed in this direction.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity in February, 1931, totaling 289,936 tons. This was followed by lumber with 224,682 tons, wheat with 200,998 tons, nitrates with 155,554 tons, and ores (principally iron) with 112,003 tons. All these items, with the exception of wheat, declined in comparison with February, 1930, as follows: Mineral oils, 90,383 tons, or 23.8 per cent; lumber, 27,264 tons, or 10.8 per cent; nitrates, 29,055 tons, or 15.7 per cent; and ores, 42,551 tons, or 27.5 per cent. Wheat showed an increase of 27,829 tons, or 16.1 per cent. In aggregate, there was a decrease of 117,394 tons, or 7.4 per cent, in cargo routed in this direction in comparison with the total transiting in February, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.719 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of February, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60¢ ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,326.25	\$10,571.00	\$244.75	
British.....	511,372.61	516,069.00	4,687.39	
Chilean.....	13,462.50	13,907.00	444.50	
Colombian.....	13,337.80	1,140.00		197.80
Danish.....	57,378.75	65,238.00	7,859.25	
Dutch.....	45,406.20	50,550.00	5,143.80	
French.....	40,765.55	48,247.00	7,481.45	
German.....	86,340.00	102,046.00	15,706.00	
Italian.....	37,561.87	41,312.60	3,750.73	
Japanese.....	92,150.08	87,745.80		4,404.28
Norwegian.....	117,227.55	136,748.80	19,521.25	
Panamanian.....	9,086.25	13,922.00	4,835.75	
Swedish.....	49,787.03	54,603.40	4,816.37	
United States.....	843,900.34	871,529.20	27,628.86	
Total.....	1,915,902.78	2,013,620.80	102,320.10	4,602.08
Net increase on all traffic.....			97,718.02	

* Includes \$36,567 collected for two transits of a naval vessel.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$20,814.70
United States foreign trade.....	6,778.96
United States—Canal Zone trade.....	35.20
Total.....	\$27,628.86

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in February, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.65	1.65
British.....	.54	1.24	.95
Chilean.....	.17	.87	.41
Colombian.....	1.27	1.61	1.44
Danish.....	.88	1.66	1.40
Dutch.....	.53	1.23	.95
French.....	.21	1.37	.76
German.....	.40	1.27	.94
Italian.....	.22	.86	.61
Japanese.....	.81	1.25	1.04
Norwegian.....	.74	1.42	1.14
Panamanian.....	.31	.88	.60
Swedish.....	.55	2.64	1.84
United States.....	.67	1.44	1.10
Averages, February, 1931.....	.60	1.39	1.05
Averages, February, 1930.....	.82	1.44	1.15
Averages February, 1929.....	.96	1.49	1.26

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of February is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	4,734	\$4,931.25	28	155,977	\$164,465.80
Ballast.....	30	168,717	121,476.24	1	4,964	3,574.08
General cargo ships:						
Laden.....	144	769,724	674,575.15	188	901,318	817,488.80
Ballast.....	29	126,598	90,777.62			
Noncargo-carrying ships:						
Naval.....	1		18,320.00	1		18,247.00
Yachts.....	7	2,720	1,964.76	1	114	82.08
Total.....	212	1,072,493	912,045.02	219	1,062,373	1,003,857.76
Method of propulsion:						
Steam.....	144	732,523	646,266.09	158	742,849	724,389.28
Motor.....	66	338,983	265,067.66	61	319,524	279,468.48
Motor auxiliary.....	2	987	711.27			
Total.....	212	1,072,493	912,045.02	219	1,062,373	1,003,857.76

Of the 302 steam-driven vessels, 220 were oil burning, 74 coal burning, and 8 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of February, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft tenders.....	2	10,189	\$7,641.75	1	4,800	\$3,645.00
Auxiliaries.....	1	2,809	3,511.25			
Battleships.....	2	53,000	26,500.00			
Cruisers.....	13	106,400	53,200.00	1	8,900	4,450.00
Destroyers.....	18	22,923	11,461.50	1	1,154	577.00
Destroyer tenders.....	2	12,000	8,640.00			
Gunboats.....	1	1,425	712.50	1	1,425	712.50
Mine layers.....	1	3,800	1,900.00			
Mine sweepers.....	9	8,550	4,275.00	2	1,900	950.00
Submarines.....	5	5,535	2,767.50	1	876	438.00
Supply ships.....	1	3,394	4,242.50	1	3,394	2,545.50
Repair ships.....	1	3,714	2,785.50			
Tankers.....	4	21,216	26,520.00	4	22,411	16,808.25
Tugs.....	1	969	484.50			
U. S. Army vessels:						
Launches.....	1	10	7.50	1	75	7.50
Mine planters.....	2	2,416	1,208.00	2	2,416	1,208.00
Transports.....	3	11,269	14,086.25			
Tugs.....	2	229	171.75	2	92	69.00
Total, U. S. Government.....	69		170,115.50	17		31,410.75
Vessels for repairs:						
Tankers.....	1	1,035	776.25	2	1,156	867.00
Grand total.....	70		170,891.75	19		32,277.75

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of February, 1931, carried cargo as follows: Atlantic to Pacific, 4,550 tons; Pacific to Atlantic, none; total, 4,550 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement, shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of February, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	2	18	\$13.08
Pacific to Atlantic.....			
Total.....	2	18	13.08

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of February, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	101,418	34,300	135,718
Local cargo shipped..... tons	5,786	951	6,737
Transit cargo arriving..... tons	1,909,019	2,167,342	4,076,361
Transit cargo clearing..... tons	1,906,806	2,149,574	4,056,380
Cargo received for transshipment..... tons	29,970	532	30,502
Cargo transhipped..... tons	29,342	2,328	31,670
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	123	47	170
Number of releases issued.....	601	290	891
Tons received.....	1,552	330	1,882
Tons withdrawn.....	1,517	543	1,860
Packages received.....	6,485	3,508	9,993
Packages withdrawn.....	5,204	3,726	8,930
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	37		37
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	13,125		13,125
Coal issued, miscellaneous:			
Panama Canal departments..... tons	104	6	110
U. S. Army, including vessels..... tons	52	22	74
Individuals and companies..... tons	119		119
Transferred to Navy..... tons	28		28
Total sales and issues..... tons	12,428	28	13,456

	Cristobal.	Balboa.	Total.
Coal on hand, February 1, 1931.....	tons.. 30,045		30,045
Coal on hand, March 1, 1931.....	tons.. 43,472		43,472
Coal received during month.....	tons.. 26,855		26,855
Coal received from Navy.....	tons..	28	28
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments.....	bbls.. 6,420.18	16,810.50	23,230.68
Panama Railroad Company.....	bbls.. 1,562.34	381.26	1,943.60
U. S. Army and Navy.....	bbls.. 1,093.80	123.56	1,217.36
Individuals and companies.....	bbls..	188.35	188.35
Total sales and issues.....	bbls.. 9,076.32	17,503.67	26,579.99
Fuel oil received during February, 1931.....	bbls.. 72,945.14		72,945.14
Fuel oil on hand, March 1, 1931.....	bbls.. 82,880.41	63,938.33	146,818.74
Diesel oil borrowed from Union Oil Co.....	bbls.. 201.50		201.50
Diesel oil issued and sold during February, 1931.....	bbls.. 201.50	2,581.90	2,783.40
Diesel oil on hand March 1, 1931.....	bbls.. 1,083.28	36,824.54	37,907.82
Miscellaneous transfers.....	bbls.. 412.48	624.41	1,036.89
Gasoline and kerosene pumped for The Panama Canal.....	bbls.. 2,316.76	5,614.65	7,931.41
Gasoline pumped for individuals and companies.....	bbls.. 684.41	7,691.25	8,375.66
Oil pumped for individuals and companies:			
Receipts.....	bbls.. 316,969.43	138,102.80	455,072.23
Issues.....	bbls.. 246,249.01	178,015.39	424,264.40
Oil pumped for U. S. Navy.....	bbls.. 106,579.36	72,062.00	178,641.36
Total fuel oil, gasoline, and kerosene handled.....	bbls.. 755,434.41	422,196.07	1,177,630.48
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	15	3	18
Measured for Panama Canal net tonnage.....	2		2
Remeasured for Panama Canal net tonnage.....	14	3	17
Panama Canal net tonnage corrected.....	1	2	3
U. S. equivalent tonnage corrected.....	6	8	14
Services of harbor equipment:			
Tugs, total operating hours.....	387½	268½	656½
Launches, total operating hours.....	1,355	1,738½	3,093½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,978.75	\$8,843.75	\$21,822.50
Pilotage.....	20,225.00	7,964.00	28,189.00
Seamen.....	9,752.00	10,048.00	19,800.00
Launch service.....	1,895.50	3,091.00	4,986.50
Wharfage.....	16,815.84	5,365.97	22,181.81
Ships measured.....	65.00		65.00
Miscellaneous.....	400.10	439.00	839.10
Ships repaired at Panama Canal shops:			
Commercial.....	49	11	51
U. S. Army and Navy.....	6	8	14
Panama Canal equipment.....	4	11	15
Total.....	59	30	89
Vessels dry-docked:			
Commercial.....	4	1	5
U. S. Army and Navy.....	2		2
Panama Canal equipment.....		2	2
Total.....	6	3	9
Clearances issued.....	277	214	491
Bills of health issued.....	288	217	505

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	558	3,715,041	2,421,283	575	3,600,396	2,549,189
Vessels entering port but not transiting Canal.	84	661,421	389,297	65	364,157	379,892
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	117	752,893	450,395	98	618,133	375,260
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	554	3,723,641	2,433,871	452	2,789,693	1,751,887
Vessels clearing port but not transiting Canal.	80	643,000	377,871	6	30,049	18,935
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	113	742,272	444,159	96	609,269	370,662

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,080	1,195	2,275	157	647	804
From Pacific ports.....	185	127	312	311	185	496
Total disembarking.....	1,265	1,322	2,587	468	832	1,300
Embarking:						
For Atlantic ports.....	943	548	1,491	37	30	67
For Pacific ports.....	145	117	262	297	250	537
Total embarking.....	1,088	665	1,753	324	280	604
Remaining on board:						
From Atlantic to Pacific ports.....	1,887	1,577	3,464	1,900	1,683	3,583
From Pacific to Atlantic ports.....	948	995	1,943	1,041	782	1,823
From Atlantic to Atlantic ports.....	7,084	110	7,194			
From Pacific to Pacific ports.....				5	72	77
Total remaining on board.....	9,919	2,682	12,601	2,946	2,537	5,483
Total arriving.....	11,184	4,004	15,188	3,414	3,369	6,783
Total departing.....	11,007	3,347	14,354	3,270	2,817	6,087

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	212	53	25.0
Pacific to Atlantic.....	219	64	29.2
Total.....	431	117	27.1

In addition to the aforesaid, 71 passenger-carrying vessels called at the port of Cristobal and 4 at Balboa without transiting the Canal, making a total of 192 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of February, 1931, 34 commercial airplanes entered and 33 cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of February, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,900.65	\$10,397.04	\$25,321.20	\$400.41	\$8,342.55	\$46,361.85
Government vessels.....	332.70	1,462.55	12,216.94	8.17	1,744.81	15,765.17
P. R. R. vessels.....	8.80	409.91	215.99	578.84	220.47	1,434.01
Total sales, February, 1931..	2,242.15	12,269.50	37,754.13	987.42	10,307.83	63,561.03
Total sales, February, 1930..	3,106.92	19,328.17	64,483.12	803.28	15,830.02	103,551.51
Total sales, February, 1929..	4,331.80	15,291.56	50,881.97	911.76	8,100.71	79,517.80
Sales at Balboa to:						
Commercial vessels.....	714.15	1,207.95	9,217.55	498.58	8,547.58	20,185.81
Government vessels.....	2,804.00	9,749.98	52,636.59	1,410.88	29,325.36	95,926.81
Total sales, February, 1931..	3,518.15	10,957.93	61,854.14	1,909.46	37,872.94	116,112.62
Total sales, February, 1930..	1,164.51	15,337.03	49,719.48	1,087.49	12,166.67	79,475.18
Total sales, February, 1929..	8,782.60	26,483.25	73,482.89	559.10	26,160.71	135,468.55

The aggregate sales to Government vessels during the month was \$111,691.98; to Panama Railroad vessels, \$1,434.01; and to other commercial vessels, \$66,547.66; making the total sales to all vessels \$179,673.65. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of February, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			Feb., 1929.	Feb., 1930.	Feb., 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	207	194	401	11	40	51	503	490	452
Pedro Miguel.....	214	204	418	13	42	55	515	515	473
Miraflores.....	214	199	413	12	41	53	466	500	466
Number of vessels put through locks.									
Gatun.....	217	212	429	30	82	112	611	596	541
Pedro Miguel.....	219	209	428	40	91	131	674	619	559
Miraflores.....	219	209	428	41	93	134	636	616	562

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	91	91	91
Panama Canal equipment.....	15	35	38
Launches (under 20 tons).....	3	2	2
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in February, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,677,170,000	962,380,000	964,580,000
Maintenance.....	29,570,000		
Leakage.....	50,000,000	20,000,000	20,000,000
Total, February, 1931.....	1,756,740,000	982,380,000	984,580,000
Total, January, 1931.....	1,936,730,000	1,118,770,000	1,178,420,000
Total, February, 1930.....	1,323,760,000	1,043,460,000	1,053,700,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of February, 1931, are shown in comparative form in the following tabulation:

	February.		February—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 666	<i>C. f. s.</i> 623	<i>C. f. s.</i> 3,315	<i>C. f. s.</i> 516	<i>C. f. s.</i> 1,197
Maximum momentary discharge for the month.....	1,500	852	43,500		
Gatun Lake watershed, total yield.....	936	1,085	5,077	705	1,763
Gatun Lake watershed, net yield.....	40	120	4,207	-287	837
Draft on Gatun Lake for lockages and power.....	2,065	2,064	2,919	1,106	2,064

¹ February 1, 1909.

² 1914 excluded.

³ One unit of Miraflores Diesel-electric power plant in operation February 1st to 16th; two units in operation 17th to 28th.

The monthly mean discharge of the Chagres River at Alhajuela for February, 1931, was 623 c. f. s., which is 48 per cent below the 30-year average of 1,197 c. f. s. The maximum monthly mean discharge on record for February is 3,315 c. f. s. in 1909, and the minimum is 516 c. f. s. in 1912. There were no rises of 5 feet or more during the month. The maximum momentary discharge for the month was 852 c. f. s. at elevation 92.17 feet on the 28th, and the minimum was 502 c. f. s. at elevation 91.62 feet on the 26th and 27th. The maximum momentary discharge on record for February is 43,500 c. f. s. at elevation 105.25 feet on February 1, 1909, and the minimum is 400 c. f. s. at 91.35 feet on February 29, 1912.

Gatun Lake varied in elevation during February from a maximum of 85.71 feet on the 1st to a minimum of 84.62 feet on the 27th. The total yield of Gatun Lake watershed was 1,085 c. f. s. which is 38 per cent below the 18-year February average. The maximum total yield on record for February is 5,077 c. f. s. in 1915, and the minimum is 705 c. f. s. in 1920. The net yield (total yield minus evaporation) amounted to 120 c. f. s. or 290 million cubic feet, which is equivalent to 0.06 foot on Gatun Lake.

Miraflores Lake varied between a maximum of 53.88 feet on the 10th and a minimum of 53.20 feet on the 8th. The mean elevation for the month was 53.53 feet, and at midnight on the 28th the lake stood at 53.42 feet.

SEISMOLOGY.

Six seismic disturbances were recorded during the month. Four were of distant origin and two of local origin.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 2,990,200 kilowatt hours, and the computed water consumption was 2,287,408,336 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,458,600 kilowatt hours, and the fuel oil consumption was 4,809.94 barrels. This station continued to carry a one-engine load of approximately 2,600 kilowatts for the purpose of water conservation, and on the 17th of the month a second engine was put into operation for the remainder of the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 41 vessels during the month. There were 346 work orders issued during the month, as compared with 386 issued during the previous month.

MECHANICAL DIVISION.

During the month of February, 1931, miscellaneous repairs were made on 50 vessels at Cristobal and 30 at Balboa. Six vessels were dry-docked at Cristobal and 3 at Balboa. The tanker *El Bauro* entered drydock for complete overhaul of engines, deck and hull. The overhaul of the M. S. *Frost* was completed during the month. Work was carried forward on extensive repairs to the M. S. *Yomachichi*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 19,400 cubic yards of grading were completed, 2 culverts constructed, headwalls placed on 4 culverts, and 800 cubic yards of rock crushed. On the Paraiso-Summit road cut-off, fabrication of bar mats was completed and 300 square yards of pavement laid. In connection with the municipal improvements at the Naval Air Station at Coco Solo, 2,515 square yards of road sub-grade were completed, and 3,000 square yards of 6-inch concrete road surface was laid, in addition to other miscellaneous municipal work.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 768,638,000 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month, with an average movement of two-tenths of a foot toward the Canal, between stations 1770-00 to 1777-00 and 1788-00 to 1794-00 W. There was no southward movement between stations 1770-00 and 1797-00 W. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in the Folks River borrow pit, excavating a total of 111,000 cubic yards of sand, coral, and clay. This material was pumped to the Colon fill with the assistance of the relay pump barge through an average pipe line length from the dredge to relay of 1,630 feet and from the relay to the dump of 3,972 feet, a total of 5,602 feet. The total amount of material removed from the borrow pit to date is 462,800 cubic yards of which 308,400 cubic yards remained in place, giving a run-off of 33.4 per cent. The area of completed fill is 16.5 acres.

The total excavation during February, 1931, was 1,372,850 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 3.....	28,050	31,600	59,650
Canal prism, Gaillard Cut—			
Project No. 3.....	49,200	12,300	61,500
Maintenance.....	8,750	34,950	43,700
Canal prism, Pacific entrance—			
Maintenance.....	1,097,000		1,097,000
Plant excavation:			
Colon fill.....	111,000		111,000
Total.....	1,294,000	78,850	1,372,850

The ferry operating at the north end of Pedro Miguel locks functioned 28 days during the month. One thousand two hundred and sixty-eight (1,268) single trips were made, and 402 Panama Canal, 1,530 U. S. Army, and 6,492 other vehicles, a total of 8,424, were ferried across the Canal.

MADDEN DAM PROJECT.

A report was received from the Designing Engineer who, with four assistants, is in Denver collaborating with engineers of the United States Reclamation Service in connection with the design and specifications of the main dam and power station, and the saddle dams. Work of an outstanding nature on which considerable progress was made by the Canal engineers and their consultants was the final report on stress and stability studies, which was in the course of preparation at the end of the month; computations for design of spillway piers, drum gate chambers, and water pressure on spillway crest; designs for the 82-inch internal differential needle valves, which were practically completed and ready for detailing at the end of the month; study for special crane for handling needle valve parts; studies of several arrangements of the power units on what is believed to be the final layout. Parallel with the machinery layouts, architectural studies for the power plant buildings are being developed. Effects of 1,000-year flood were treated in a paper, furnishing the data for fixing the elevation of the top of the spillway gates at elevation plus 250 feet.

On the Isthmus, studies for Alhajuela water supply were continued and preliminary plans and estimates, accompanied by sketches, were prepared; preparation of drawings and charts for final geological report was continued; study and report on bids for fabrication and delivery of transmission line towers, and study of preliminary layout of outdoor substation were made; final rock contour map at dam site, final gravel map, and revised drawings to conform with final cross-section at dam site were made and forwarded to Denver. Work of a miscellaneous nature consisting of surveying, silt investigations, seepage investigations, gaugings, geological investigations, etc., was continued.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on February 28, 1931, was 24,209, composed of 8,161 Americans, 2,957 of whom were men, 2,469 women, and 2,735 children; 178 Europeans, 87 of whom were men, 31 women, and 60 children; and 15,870 West Indians, 4,428 of whom were men, 2,831 women, and 8,611 children. The total number of persons in quarters on February 28, 1930, was 22,316.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of February 18, 1931, with a comparison of the working force for the preceding month and for February, 1930:

	Total employees.		As of February 18, 1931.		
	February, 1930.	January, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	195	116	57	63	120
Electrical.....	399	418	169	232	401
Municipal Engineering.....	842	1,213	100	1,093	1,193
Lock Operation.....	983	2,006	354	1,504	1,858
Dredging.....	1,282	1,195	199	1,004	1,203
Madden Project.....	1,203	249	14	187	201
Mechanical.....	1,429	1,362	474	838	1,312
Marine.....	842	836	199	659	858
Fortifications.....	469	340	22	293	315
Total.....	7,635	7,735	1,588	5,873	7,461

	Total employees.		As of February 18, 1931.		
	February, 1930.	January, 1931.	Gold.	Silver.	Total.
Supply Department:					
Quartermaster.....	2,377	1,905	200	1,641	1,841
Commissary.....	1,565	1,553	232	1,390	1,622
Cattle Industry—Plantations.....	116	117	2	210	212
Hotel Tivoli.....	130	121	8	119	127
Hotel Washington.....	119	110	8	104	112
Transportation.....	331	324	79	246	325
Total.....	4,638	4,130	529	3,710	4,239
Accounting Department.....	211	203	203	6	209
Health Department.....	1,156	1,100	282	848	1,130
Executive Department.....	846	884	546	332	878
Total.....	2,213	2,187	1,031	1,186	2,217
Panama Railroad Company:					
Superintendent.....	339	317	45	266	311
Transportation.....	189	196	63	127	190
Receiving and Forwarding Agency.....	1,523	1,741	81	1,262	1,343
Coaling Stations.....	365	270	38	220	258
Total.....	2,416	2,524	227	1,875	2,102
Grand total, February, 1930.....	16,932				
Grand total, January, 1931.....		16,576			
Grand total, February, 1931.....			3,375	12,644	16,019

Additions to the gold force on the Isthmus in February were as follows: Reemployed in the United States, 1; employed on the Isthmus, 5; reemployed on the Isthmus, 8; total, 14. Separations from the gold force totaled 20, as follows: Resigned 9; discharged, 9; retired, 1; died, 1. At the end of the month there were on file 775 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 160 deaths occurred during the month of February, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.37 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 33; pneumonia (broncho and lobar), 17; nephritis (acute and chronic), 10; organic diseases of the heart, 9; and diarrhea and enteritis, 9. There were 8 deaths from syphilis, 6 from apoplexy, and 2 from leprosy. There were 26 deaths among nonresidents, which are not included in the above statistics.

There were 302 live births and 23 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 27.15. Deaths among children under 1 year of age numbered 34, giving an infant mortality rate based on the number of live births reported, of 112.58.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 100, of whom 14 were employees (2 white and 12 colored), 18 were members of employees' families (all colored), 8 were Canal Zone agriculturists, 37 were other civilian nonemployees, and 23 were Army and Navy personnel. Of the 32 employees and members of employees' families, 28 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There were three deaths from malaria among residents—one a colored child who had been visiting in the interior where the infection was contracted, one a Canal Zone agriculturist, and one a Panamanian child residing in the city of Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$264,998.85, of which \$257,664.13 was for the Department of Operation and Maintenance, and \$7,334.72 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$43,701.10.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of January, 1931, as compared with January, 1930, with the figures for the first 7 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of February at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	January, 1930.	January, 1931.	To the end of January.	
			Last year.	This year.
Tolls.....	\$2,360,222.49	\$2,108,157.19	\$16,188,773.35	\$15,005,047.24
Other receipts.....	340,803.94	394,755.21	2,549,246.26	2,423,055.33
Total transit revenues.....	2,701,026.43	2,502,912.40	18,738,019.61	17,428,102.57
Total transit expenses.....	1,076,367.27	1,286,496.79	7,691,514.36	8,074,443.63
Net transit revenues.....	1,624,659.16	1,216,415.61	11,046,505.25	9,353,658.94
Three per cent capital charge.....	622,767.81	626,623.19	4,345,307.14	4,382,960.34
Transit surplus.....	1,001,891.35	589,792.42	6,701,198.11	4,970,698.60
Business revenues.....	1,764,379.02	1,620,774.47	11,254,283.31	10,643,494.89
Business expenses.....	1,665,116.84	1,554,698.71	10,620,156.53	10,158,015.53
Net business revenues.....	99,262.18	66,075.76	634,126.78	485,479.36
Three per cent capital charge.....	63,751.10	65,444.98	463,601.63	481,338.98
Business surplus.....	35,511.08	630.78	170,525.15	4,140.38
Combined revenues.....	4,465,405.45	4,123,686.87	29,992,302.92	28,071,597.46
Combined expenses.....	2,741,484.11	2,841,195.50	18,311,670.89	18,232,459.16
Net revenues.....	1,723,921.34	1,282,491.37	11,680,632.03	9,839,138.30
Three per cent capital charge.....	686,518.91	692,068.17	4,808,908.77	4,864,299.32
Combined surplus.....	1,037,402.43	590,423.20	6,871,723.26	4,974,838.98

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending March 21, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Durazzo.....	Hamburg-American Line.....		March 8.....		133
Cartago.....	United Fruit Co.....		March 8.....		57
Colombia.....	Royal Netherlands S. S. Co.....		March 8.....		4
Pastores.....	United Fruit Co.....	March 8.....	March 8.....	5	672
Helder.....	Royal Netherlands S. S. Co.....	March 8.....	March 9.....	97	146
Cauca.....	National Navigation Co.....		March 9.....		60
San Jose.....	French S. S. Line.....	March 9.....	March 9.....	20	195
Oroya.....	Pacific Steam Navigation Co.....	March 9.....	March 9.....	57	107
Gen. M. H. Sherman.....	Sudden & Christenson.....	March 9.....	March 10.....	183	(²)
Guatemala.....	Panama Mail S. S. Co.....	March 9.....	March 10.....	255	85
City of San Francisco.....	Panama Mail S. S. Co.....	March 9.....	March 11.....	1,506	878
San Clemente.....	Quaker S. S. Line.....	March 10.....	March 11.....	150	(²)
Vancouver.....	Hamburg-American Line.....	March 10.....	March 11.....	105	634
Galicia.....	Hamburg-American Line.....	March 10.....	March 11.....	68	41
Pollux.....	Anglo-Saxon Petroleum Co.....	March 10.....	March 11.....	11,941	(²)
Narenta.....	Pacific Steam Navigation Co.....	March 10.....	March 11.....	(²)	111
Caldas.....	National Navigation Co.....	March 10.....	March 13.....	209	150
Tela.....	United Fruit Co.....	March 11.....	March 11.....	651	46
Kwanto Maru.....	Osaka Shosen Kaisha.....	March 11.....	March 11.....		(²)
Witell.....	North German Lloyd.....	March 11.....	March 11.....	25	266
Carare.....	Elders & Fyffes, Ltd.....	March 11.....	March 11.....	3	(²)
Cristobal.....	Panama R. R. S. S. Line.....	March 11.....	March 11.....	5,542	
Ulva.....	United Fruit Co.....	March 11.....	March 12.....	475	14
Davisian.....	Leyland S. S. Line.....	March 11.....	March 12.....	383	(²)
Nebraska.....	Royal Mail Steam Packet Co.....	March 11.....	March 12.....	242	33
Sixtoala.....	United Fruit Co.....	March 11.....	March 12.....	458	261
Calí.....	Roland Line.....	March 11.....	March 14.....	349	164
Pearl Marie.....	R. Feuillebois.....	March 12.....	March 12.....	(²)	28
Duchess D'Aosta.....	Navigazione Libera Triestina.....	March 12.....	March 12.....	55	39
Salvador.....	Pacific Steam Navigation Co.....	March 12.....	March 12.....	369	
C. C. Acme.....	R. Foster.....	March 12.....	March 12.....	1	(²)

¹ No cargo discharged.² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Amassis.....	Hamburg-American Line.....	March 12....	March 13....	83	177
Esfuerza.....	J. Asmussen.....	March 12....	March 13....	50	.....
Austvaengen.....	Aluminium Line.....	March 12....	March 13....	320	83
Martinique.....	Colombian S. S. Line.....	March 12....	March 13....	23	266
Colombia.....	Panama Mail S. S. Co.....	March 12....	March 13....	1,034	235
Nosa Queen.....	N. O. & S. A. S. S. Co.....	March 12....	March 13....	227	80
Aconcagua.....	Chilean S. S. Line.....	March 13....	March 13....	(¹)	7
Laguna.....	Pacific Steam Navigation Co.....	March 13....	March 13....	21	62
Colombia.....	Royal Netherlands S. S. Co.....	March 13....	March 14....	14	926
Tacoma.....	Hamburg-American Line.....	March 13....	March 14....	128	27
Cefalu.....	Standard Fruit & S. S. Co.....	March 13....	March 14....	97	454
Heredia.....	United Fruit Co.....	March 14....	March 14....	202	.....
Tela.....	United Fruit Co.....	March 14....	March 14....	231	455
Santa Elisa.....	Grace Line.....	March 14....	March 14....	67	.....
Oropes.....	Pacific Steam Navigation Co.....	March 14....	March 14....	62	48
San Jose.....	United Fruit Co.....	March 10....	March 12....	1,141	(²)
Cristobal.....	Panama R. R. S. S. Line.....	March 15....	March 15....	.....	540
Heredia.....	United Fruit Co.....	March 15....	March 15....	.....	89
Santa Elisa.....	Grace Line.....	March 15....	March 15....	.....	345
Ulua.....	United Fruit Co.....	March 15....	March 15....	24	655
Margaret Johnson.....	Johnson S. S. Line.....	March 15....	March 16....	97	(²)
Cerigo.....	Hamburg-American Line.....	March 15....	March 20....	623	381
Caica.....	National Navigation Co.....	March 15....	March 20....	70	141½
Santa Clara.....	Grace Line.....	March 16....	March 16....	98	128
Damsterdijk.....	Holland-America Line.....	March 16....	March 17....	(¹)	198
Pacific Shipper.....	Furness, Withy & Co.....	March 16....	March 17....	(¹)	337
Bodegraven.....	Royal Netherlands S. S. Co.....	March 17....	March 18....	169	84
Magdalena.....	Hamburg-American Line.....	March 17....	March 18....	342	(²)
Pellerin de la Touche.....	French Line.....	March 17....	March 19....	175	488
Saramacca.....	United Fruit Co.....	March 17....	March 19....	1,392	(¹)
Salvador.....	Pacific Steam Navigation Co.....	March 18....	March 18....	.....	806
Sanyo Maru.....	Osaka Shosen Kaisha.....	March 18....	March 18....	206	33
Teno.....	Chilean S. S. Line.....	March 18....	March 18....	85½	46
Irioua.....	United Fruit Co.....	March 18....	March 18....	958	(²)
Abraham Lincoln.....	Fred Olsen & Co.....	March 18....	March 19....	487	(²)
Zacapa.....	United Fruit Co.....	March 18....	March 19....	645	623
Calamares.....	United Fruit Co.....	March 18....	March 19....	587	10½
Juan Sebastian Elcano.....	Spanish S. S. Line.....	March 18....	March 18....	228	.....
Brielle.....	Royal Netherlands S. S. Co.....	March 18....	March 21....	81	533
Esfuerza.....	J. Asmussen.....	March 19....	March 19....	.....	13½
Samuel Bakke.....	Knut Knutsen Line.....	March 19....	March 19....	35	(²)
Albert Voegler.....	Hamburg-American Line.....	March 19....	March 19....	26	1
Donau.....	North German Lloyd Line.....	March 19....	March 21....	(¹)	387
Manizales.....	North German Lloyd.....	March 19....	March 19....	285	.....
San Lucas.....	States S. S. Line.....	March 19....	March 19....	108	(²)
Santa Barbara.....	Grace Line.....	March 19....	March 20....	308	315
Seattle.....	Hamburg-American Line.....	March 20....	March 20....	42	329
Port Fremantle.....	Commonwealth & Dominion Line.....	March 20....	March 20....	80	(²)
Bolivar.....	United Fruit Co.....	March 20....	March 21....	70½	333
Corinto.....	Panama Mail S. S. Co.....	March 21....	March 21....	1,680	.....
Contessa.....	Standard Fruit & S. S. Co.....	March 21....	March 21....	267	433
Rhein.....	Hamburg-American Line.....	March 20....	March 21....	97	88
Aachou.....	North German Lloyd.....	March 20....	March 21....	(¹)	729
Parissima.....	United Fruit Co.....	March 21....	March 21....	64	.....
Santa Teresa.....	Grace Line.....	March 21....	March 21....	117	107
Caldas.....	National Navigation Co.....	March 21....	March 21....	242	(²)
St. Joseph.....	French Line.....	March 21....	March 21....	710	.....
Magdalena.....	Hamburg-American Line.....	March 21....	March 21....	1	.....
Irioua.....	United Fruit Co.....	March 21....	March 21....	15	140
Dramatist.....	T. & J. Harrison.....	March 21....	March 21....	219	.....

¹ No cargo discharged.² No cargo laded.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 19, 1931.

No. 855.

Caribbean Sea, St. Andrews Island, light reported not burning. The following is quoted from Notice to Mariners No. 10, Washington, D. C., dated March 7, 1931:

The master of the yacht *Ulowana* reports that St. Andrews Island Light was not burning on the night of February 17, 1931. The *Ulowana* passed within one-half of a mile of the light.

Approximate position: 12° 35' 54" N., 81° 40' 42" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 21, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Water draft.	From—	For—	Cargo.	Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Gross.	Net.	
Scintille ¹ 2	14	18 30	15	00 30	15	9 02	15	9 53	British.	Anglo-American Oil Co.	425 0	57 0	16 6	Ellesmere Pt., Eng	Los Angeles, Calif	Ballast.	2 136	7 012	5 022
Santa Elisa	14	15 15	15	2 10	15	9 47	15	16 20	American.	Grace Line	360 3	51 7	22 8	New York, N. Y.	Valparaiso, Chile.	General.	2 480	5 957	4 325
Point Montara	14	23 59	15	2 10	15	9 53	15	10 55	American.	Gulf Pac. Redwood Line	324 0	46 2	20 0	Tampa, Fla.	Seattle, Wash.	General.	1 366	3 984	2 612
Tweedhead	15	4 45	15	4 50	15	11 54	15	15 00	British.	Bank Line, Ltd.	426 0	57 4	18 10	Baltimore, Md	Shanghai, China.	General.	2 557	7 123	5 412
Minnesota	15	2 20	15	6 15	15	13 37	15	14 45	American.	Amer-Hawaiian Line.	407 7	53 7	18 0	Boston, Mass.	Portland, Ore.	General.	2 557	7 150	5 022
Sapelo	15	10 10	15	10 15	15	18 30			American.	U. S. Navy.	461 0	60 0		Beaumont, Texas.	Balboa, C. Z.	(4)			
New Jersey	15	13 20	15	14 00	15	21 28	15	22 25	American.	The Texas Co.	416 0	56 0	22 0	Providence, R. I.	Los Angeles, Calif	Ballast.	6 925	4 982	
Grantley Hall	15	14 15	15	14 55	15	22 20	15	23 45	British.	Inter-Freighting Co.	412 0	56 0	17 0	Norfolk, Va.	Topoilla, Chile.	Ballast.	6 554	4 633	
Salinas	15	19 15	16	00 10	16	9 30			American.	U. S. Navy.	463 0	60 0		U. S. port.	Balboa, C. Z.	Fuel oil.			
Chinese																			
Prince	15	23 10	16	1 45	16	10 20	16	11 25	British.	Prince Line, Ltd.	441 6	60 3	18 0	New York, N. Y.	Singapore, Str. Set.	General.	2 253	9 254	6 265
El Cerro	16	00 25	16	3 25	16	10 51	16	13 20	British.	Anglo-Ecuador. Oil Co.	407 4	52 2	19 2	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.	6 046	4 326	
Agaworld	16	2 30	16	4 40	16	13 00	16	14 05	American.	Richfield Oil Co.	429 0	59 0	20 0	Miami, Fla.	Los Angeles, Calif	Ballast.	7 720	5 615	
Margaret																			
Johnson	15	14 30	16	10 18	16	16 55	16	22 00	Swedish.	Johnson Line.	405 0	54 0	20 8	Stockholm, Sweden	San Francisco, Cal.	General.	3 152	7 048	5 337
Marore	15	12 00	16	11 15	16	18 43	16	20 00	American.	Ore S. S. Corp.	550 3	72 2	24 3	Baltimore, Md	Cruz Grande, Chile	Ballast.	15 551	4 297	
Salma City	16	11 10	16	11 35	16	19 41	16	20 45	American.	Ishtman S. S. Lines	424 0	52 0	25 4	Baltimore, Md	Tacoma, Wash.	Steel, general.	7 453	7 611	5 450
Hendon Hall	16	11 15	16	12 25	16	20 50	16	21 50	British.	Inter-Freighting Co.	399 6	53 0	17 8	Baltimore, Md	Antofagasta, Chile.	General.	2 349	5 852	4 112
Sacramento	16	16 05	17	00 01					American.	U. S. Navy.	224 0	40 0	24 2	Cristobal, C. Z.	Gatun, C. Z.	Ballast.			
California	16	22 25	17	02 01	17	10 28	17	11 52	American.	The Texas Co.	500 0	68 0	25 7	Pt. Arthur, Texas	Los Angeles, Calif	Ballast.	10 853	8 271	
Sutherland	17	1 15	17	6 25	17	13 53	17	16 10	American.	Nelson Line.	380 0	53 2	17 6	New York, N. Y.	Seattle, Wash.	(5)	1 338	5 654	4 123
Illinois	17	6 25	17	7 15	17	14 45	17	15 45	American.	The Texas Co.	416 8	56 0	19 3	New York, N. Y.	Los Angeles, Calif	Ballast.	6 945	5 011	
Mahia	17	00 55	17	9 10	17	16 25	18	1 53	British.	Shaw, Savill & Albion.	477 6	62 9	25 11	Glasgow, Scotland	Bluff, N. Z.	General.	2 529	11 110	7 894
Edward																			
Lukenbach.	17	13 55	17	14 45	17	21 52	17	22 45	American.	Lukenbach Line.	436 6	57 0	20 6	Boston, Mass.	Seattle, Wash.	General.	3 237	8 543	6 427
Pacific Shipper	16	20 50	17	19 30	18	9 02	18	10 06	British.	Furness, Withy & Co.	420 0	52 0	18 0	Glasgow, Scotland	Vancouver, B. C.	General, bananas	844	7 892	5 858
Hegira	17	16 20	17	19 35	18	9 55	18	11 52	American.	Norton, Lilly & Co.	440 0	56 0	27 6	Mobile, Ala.	Vancouver, B. C.	Steel.	9 322	8 353	6 113
Virginian	17	18 00	18	3 00	18	11 16	18	12 15	American.	Amer-Hawaiian Line.	491 5	58 2	20 0	Boston, Mass.	Seattle, Wash.	General.	2 300	10 491	7 601
Brazos	17	19 25	18	4 35	18	12 15			American.	U. S. Navy.	456 0	56 0		U. S. port.	Balboa, C. Z.	Fuel oil.			
Candian																			
Conqueror	17	21 30	18	6 25	18	14 12	18	15 25	British.	Can. Nat. Steamships.	400 4	52 0	19 0	Halifax, N. S.	Auckland, N. Z.	General.	1 573	5 954	4 139
Tacoma City	17	23 45	18	7 10	18	15 16	18	16 45	British.	Reardon Smith Line.	400 4	51 3	23 6	Tampa, Fla.	Kobe, Japan.	General.	7 319	6 045	5 858
Moveria	18	1 30	18	8 09	18	15 41	18	16 35	British.	Donaldson Line.	385 6	54 0	18 2	Glasgow, Scotland	Vancouver, B. C.	General.	939	6 576	4 724
Salvador	12	1 40	18	9 20	18	17 18	18	20 11	British.	Pacific Steam Nav. Co.	215 0	33 0	15 0	Cristobal, C. Z.	Champerico, Guatemala.	General.	795	1 270	735
Champerico	2-1	20 00	18	9 20	18	17 18	18	18 45	British.	Pacific Steam Nav. Co.	290 1	41 7	16 8	Cristobal, C. Z.	Valparaiso, Chile.	General.	2 597	1 270	1 587
Eastern Sun	18	6 55	18	10 20	18	17 38	18	18 45	American.	Sun Oil Co.	480 6	66 0	21 0	Philadelphia, Pa.	Los Angeles, Calif	Ballast.			
Pat Dolney	18	11 10	18	11 20	18	18 48	18	20 06	American.	Richfield Oil Co.	430 0	59 2	19 0	Baltimore, Md	Los Angeles, Calif	Ballast.	7 773	5 634	
Bodegraven	17	19 40	18	12 10	18	19 15	18	20 12	Dutch.	Royal Nedh. S. S. Co.	400 0	58 0	20 0	Hamburg, Germany	Corral, Chile	General.	1 504	7 334	6 018
Tanker.																			

¹ Tanker.

² Motor ship.

³ Gunboat.

⁴ Steel, iron, and general.

⁵ Phosphate and general.

Arizona ¹	18	16	30	18	19	00	19	09	19	10	27	American	The Texas Co.	391.8	51.3	21.0	Pt. Arthur, Texas.	Los Angeles, Calif.	Lubricating oil.	3,000	5,552	3,757
Ontonaga	18	19	50	18	20	10	19	05	19	11	32	American	Ford Motor Co.	251.0	43.6	19.6	Chester, Pa.	Seattle, Wash.	Auto. parts	2,430	2,656	1,621
Bronxville ²	18	21	23	10	3	20	19	13	43	19	13	Norwegian	Strange & Co.	386.0	54.2	13.9	Boston, Mass.	Portland, Ore.	Ballast	6,718	5,058	7,484
Washington	18	22	23	19	4	40	19	13	43	19	14	American	The Texas Co.	425.8	57.0	17.8	Baltimore, Md.	Los Angeles, Calif.	Ballast	7,216	2,908	2,668
Saranauca	17	14	45	19	6	10	19	14	00	19	14	American	United Fruit Co.	336.0	42.0	17.8	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,338	7,643	5,720
San Lucas	19	00	35	19	9	48	19	17	58	19	19	American	States S. S. Co.	345.0	56.0	19.6	London, England	Vancouver, B. C.	General	3,082	6,822	5,061
Samuel Bakke ¹	19	2	20	19	10	30	19	09	02	20	3	Norwegian	Scandl-Sø, Pacific Co.	331.0	53.0	18.0	Oslo, Norway	Talcahuano, Chile.	General	3,082	6,822	5,061
Penelope ¹	19	11	00	19	11	15	19	19	31	20	2	Danish	W. Tankership Rhederei	470.6	63.0	18.0	Hamburg, Germany	Talara, Peru	Ballast	9,302	6,127	5,953
Lincoln ¹	18	22	30	19	12	08	19	20	12	22	3	Norwegian	Fred Olsen & Co.	436.0	56.2	25.6	Oslo, Norway	Vancouver, B. C.	General	5,787	8,005	5,953
Santa Barbara ²	19	19	05	20	3	25	20	10	59	20	15	American	Grace Line	466.0	64.0	23.3	New York, N. Y.	Talcahuano, Chile.	General	2,479	10,687	6,633
America ²	19	12	55	20	4	50	20	14	46	20	15	Danish	East Asiatic Co.	465.0	62.0	19.0	Copenhagen, Den.	Vancouver, B. C.	Ballast	11,060	8,076	161
Cauca ²	15	20	55	20	4	35	20	14	30	20	18	Colombian	National Navigation Co.	107.9	22.9	9.0	Buenaventura, Col.	Buenaventura, Col.	General	156	262	4,916
Pacific Hemlock	19	14	15	20	6	30	20	17	35	20	18	American	Dimon S. S. Corp.	409.6	54.0	23.0	Philadelphia, Pa.	Tacoma, Wash.	General	3,499	6,630	4,916
Pennsylvania ¹	20	5	40	20	6	30	20	15	37	21	1	American	Panama-Pacific Line	586.4	80.2	27.0	New York, N. Y.	San Francisco, Cal.	General	2,869	21,262	18,194
President Harrison	20	5	50	20	7	55	20	16	35	20	21	American	Dollar Line	522.0	62.0	27.0	New York, N. Y.	Round the world	General	3,826	12,618	9,251
Bridger ⁷	19	15	20	20	8	45	20	18	35			American	U. S. Navy	400.0	55.0	20.6	Norfolk, Va.	Balboa, C. Z.	Naval stores	1,290		
Asheville ⁴	7	8	15	20	8	55						American	U. S. Navy	225.0	41.0		Cristobal, C. Z.	Gatun Lake, C. Z.	General	2,212	6,805	5,077
Ruby Castle ³	19	21	45	20	9	35	20	18	55	20	19	British	Barber S. S. Line	400.0	52.0	17.3	New York, N. Y.	Manila, P. I.	General	4,427	9,576	6,618
Silversandal ²	20	10	40	20	10	30	20	19	30	20	20	British	Silver Line, Ltd.	456.0	62.0	19.6	New York, N. Y.	Columbo, Ceylon	General	4,427	9,576	6,618
Chilore	19	18	02	21	4	50	21	13	23	21	14	American	Ore S. S. Corp.	549.0	72.0	21.5	Norfolk, Va.	Cruz Grande, Chile	Ballast	387	1,572	1,011
Cerro	15	23	15	21	6	05	21	14	33	21	15	German	Hamburg-American Line	227.2	34.4	14.3	Cristobal, C. Z.	Guayaquil, Ecuador	General	1,226	5,435	3,879
San Diego	21	3	05	21	6	05	21	14	27	21	15	American	Williams S. S. Line	376.4	52.0	16.8	Baltimore, Md.	Tacoma, Wash.	General	2,021	6,572	4,788
Eleanor	20	23	40	21	7	05	21	15	35	22	14	American	Arrow Line	410.5	54.3	18.0	Baltimore, Md.	Seattle, Wash.	General	6,895	5,219	4,400
Christenson	21	4	50	21	7	30	21	16	52	21	18	Japanese	Kokusa Kisen Kaisha	385.0	51.0	26.5	Moji, Japan	Los Angeles, Calif.	Ballast	10,084	7,388	5,001
Chufuku Maru	21	7	15	21	8	30	21	17	18	21	18	American	Standard Transp. Co.	468.3	62.7	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,106	5,001	4,761
China Arrow	21	8	15	21	9	30	21	17	40	21	22	French	Desmarais Freres	425.0	57.0	17.0	Lyons, France	Los Angeles, Calif.	General	4,761	6,264	4,761
Monique ¹	21	11	35	21	13	15	21	20	37	21	25	Norwegian	Pearlrey & Eger	376.5	54.0	21.8	Louison, Texas	Shanghai, China	General	6,085	4,289	1,372
Siljestad ²	21	12	50	21	14	00	21	21	34	21	22	British	MacLay & McIntyre	402.0	64.0	20.0	Hull, England	Vancouver, B. C.	Ballast	1,372	11,007	7,698
Manusda	19	10	20	21	14	55	21	22	25	21	23	German	North German Lloyd	521.0	64.0	22.11	Bremen, Germany	Los Angeles, Calif.	General	2,647	6,777	4,761
Donau	21	14	10	21	15	35	21	22	50	22	00	American	Amer-Hawaiian Line	404.6	54.0	18.0	Boston, Mass.	Portland, Ore.	General	2,647	6,777	4,761

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

1 Tanker.
2 Phosphate, rails, etc.
3 Supply ship.
4 Phosphate, rails, etc.

Wright ⁹	15	6	18	15	14	35	American...	U. S. Navy	488.0	58.0		Balboa, C. Z.	Cristobal, C. Z.											
Eagle No. 58 ¹⁰	15	6	42	15	14	40	American...	U. S. Navy	200.0	28.0		Balboa, C. Z.	Cristobal, C. Z.											
Pagle No. 35 ¹⁰	15	6	52	15	15	30	American...	U. S. Navy	200.0	28.0		Balboa, C. Z.	Cristobal, C. Z.											
Mailard No. 44 ¹	15	6	57	15	15	30	American...	U. S. Navy	187.0	38.0		Balboa, C. Z.	Cristobal, C. Z.											
Beaconlight ¹	14	21	25	15	7	30	15 20 50	American...	Union Oil Co.	435.0	56.0	27.4	Los Angeles, Calif.	Baltimore, Md.						Gas oil	9,833	7,482	5,133	
Pacific Oak ¹²	15	11	50	15	12	43	15 20 55	American...	Dipon S. S. Corp.	409.7	54.0	25.0	Seattle, Wash.	Norfolk, Va.						Lumber, general	6,773	6,687	4,974	
Cauca ¹²	15	13	05	15	13	46	15 20 55	Colombian...	National Navigation Co.	107.0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.						(15)	63	262	161	
Cerro ¹²	15	14	25	15	15	35	15 23 15	German...	Hamburg-American Line	227.2	34.4	14.1	Guayaquil, Ecuador	Cristobal, C. Z.						(16)	623	1,572	1,011	
Yestal ¹³	16	6	12	16	6	12		American...	U. S. Navy	450.0	60.0		Balboa, C. Z.	Cristobal, C. Z.										
Sacramento ¹⁴	16	6	26	16	6	26		American...	U. S. Navy	224.0	40.0		Balboa, C. Z.	Cristobal, C. Z.										
Northern Sun ¹⁵	16	2	15	16	7	17	16 18 55	American...	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.						Gasoline	13,515	9,761	6,649	
Santa Clara ¹⁶	16	7	45	16	9	15	16 17 25	American...	Grace Line	483.3	63.9	26.0	Talcahuano, Chile.	New York, N. Y.						(17)	5,647	11,080	7,442	

¹ Tanker.
⁹ Aircraft tender.
¹⁰ Coffee, cocoa, tagua, and hides.
¹¹ Copper, nitrates, coffee, and general.
¹² Motor ship.
¹³ Repair ship.
¹⁴ Gunboat.
¹⁵ Coffee, gold, and general.
¹⁶ Gunboat.

1 Tanker.
2 Aircraft tender.
3 Coffee, cocoa, tagua, and hides.
4 Copper, nitrates, coffee, and general.
5 Motor ship.
6 Patrol boat.
7 Mine sweeper.
8 Repair ship.
9 Gunboat.
10 Coffee, gold, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Gothic Star	16	00 25	16	9 46	16	19 40	16	19 40	British	Blue Star Line, Ltd.	420.5	51.7	23.2	N. Westminster, B. C.	Newcastle, England	Fruit, general.	4,506	7,521	5,852
Daustrdyk	16	4 15	16	10 31	16	20 55	17	9 25	Dutch.	Holland-America Line.	490.8	64.6	30.0	Vancouver, B. C.	Rotterdam, Holland	General.	9,381	11,721	8,351
Chilcop	16	4 45	16	10 47	16	21 35	16	22 25	American.	Inter. Freight Corp.	411.5	54.1	24.0	Iquique, Chile.	Savannah, Ga.	Nitrates	7,950	6,909	4,973
Northumber-land	15	22 45	16	12 16	16	22 25	16	22 25	British.	Federal Steam Nav. Co.	530.5	63.0	27.0	N. Plymouth, N. Z.	Glasgow, Scotland	Frozen, general.	6,795	13,263	9,124
Tashmoo	16	12 30	16	13 39	16	23 20	16	23 20	American.	Charles Nelson & Co.	324.0	46.2	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	4,200	3,984	2,628
Port Dunein	16	9 15	16	14 03	17	00 10	17	00 10	British.	Comth & Dom. Line.	466.9	59.8	26.0	Dunedin, N. Z.	London, England.	Frozen, general.	5,360	9,959	7,226
Anticam	16	13 30	16	15 09	17	1 55	17	1 55	American.	Richfield Oil Co.	433.6	56.2	27.2	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	9,410	7,426	5,073
White Shadow	16	13 45	16	18 08	17	1 55	17	1 55	American.	E. H. Norton.	77.7	22.2	9.0	Gusayquil, Ecuador	Cristobal, C. Z.	Ballast.	98		55
California	16	12 15	17	6 10	17	14 05	17	14 05	American.	Panama-Pacific Line.	574.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General.	6,306	24,506	17,565
Saramacca	16	15 30	17	6 36	17	14 45	19	6 10	American.	United Fruit Co.	336.7	42.0	21.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	1,323	3,668	2,308
Dilworth	16	14 15	17	7 17	17	15 55	17	15 55	American.	Shell Oil Co.	435.0	58.0	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	10,000	7,441	5,077
Kansan	17	5 30	17	8 18	17	18 40	17	18 40	American.	Amer-Hawaiian Line.	404.6	53.9	27.0	Portland, Oreg.	Boston, Mass.	General.	7,277	7,779	4,921
Ward	17	2 50	17	9 04	17	19 25	17	19 25	American.	Roosevelt S. S. Co.	395.5	55.0	26.2	Fremantle, Aust'la.	Baltimore, Md.	General.	7,583	7,342	5,247
Doris Kellogg	17	10 45	17	11 35	17	20 30	17	20 30	American.	U. S. Tankship Corp.	390.0	54.2	28.0	Port Allen, T. H.	New Orleans, La.	Molasses	7,750	6,209	4,303
Sanyo Maru	17	17 25	17	18 10	18	1 00	18	1 00	Japanese.	Ozaka Shosen Kaisha.	446.0	60.0	26.0	Hoogkong, China.	New York, N. Y.	General.	5,817	8,942	6,251
Brand	17	17 50	17	18 58	18	3 00	18	3 00	Norwegian.	J. J. Moore & Co.	380.5	54.7	26.0	Kolsichang, Siam.	Nuevitas, Cuba.	Rice.	8,220	6,851	5,131
Anglo	17	18 00	17	19 09	18	4 40	18	10 20	British.	Nitrato Prod. S. S. Co.	426.0	58.0	22.0	Port Pico, Aust'lia.	London, England.	Wool, wheat.	6,400	7,680	5,680
Canadian	17	19 20	18	6 22	18	16 35	18	19 20	Chilean.	So. American S. S. Co.	421.8	56.0	26.0	Talcahuano, Chile.	New York, N. Y.	General.	4,640	7,764	4,672
Teno	17	20 18	18	6 46	18	17 00	18	17 25	British.	Donaldson Line, Ltd.	425.0	56.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,662	7,827	5,429
Saluria	18	2 45	18	7 33	18	17 55	18	19 20	Belgian.	Cie. Maritime Belge.	471.1	60.8	26.0	Vancouver, B. C.	Antwerp, Belgium.	General.	10,450	9,264	7,044
Carlier	18	3 10	18	8 55	18	18 50	18	18 50	British.	Can. Nat. Steamships.	400.3	52.2	25.0	Melbourne, Aust'lia.	Halifax, N. S.	General.	2,205	5,906	4,141
Canadian	18	00 45	18	12 28	18	20 25	21	14 55	Dutch.	Royal Neth. S. S. Co.	402.4	58.2	26.0	Corral, Chile.	Amsterdam, Holland.	(*)	8,229	7,322	4,788
Britisher	18	17 40	18	18 40	19	17 05	19	17 05	American.	Bethlehem Steel Co.	500.3	72.2	35.0	Cruz Grande, Chile.	Baltimore, Md.	Iron ore.	21,650	15,551	4,297
Brelle	18	17 50	18	18 55	19	3 25	19	10 35	German.	Hamburg-America Line	459.8	53.8	24.0	Valparaiso, Chile.	Hamburg, Germany.	Sugar, cotton.	6,545	7,173	5,514
Steele	18	17 50	18	18 55	19	3 25	19	10 35	German.	Hamburg-America Line	459.8	53.8	24.0	Valparaiso, Chile.	Hamburg, Germany.	Sugar, cotton.	6,545	7,173	5,514
Albert Vogler	18	17 50	18	18 55	19	3 25	19	10 35	German.	Hamburg-America Line	459.8	53.8	24.0	Valparaiso, Chile.	Hamburg, Germany.	Sugar, cotton.	6,545	7,173	5,514
Harry	18	19 10	18	20 05	19	4 25	19	4 25	American.	Luckenbach Line.	448.9	60.2	30.0	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,541	9,262	6,853
Lukenbach.	18	18 45	19	6 03	19	17 45	19	17 45	American.	Isishman S. S. Lines	410.0	56.0	31.4	Portland, Oreg.	Avonmouth, Eng.	Grain, general.	10,102	7,780	5,811
Challenger	19	3 30	19	6 54	20	00 20	21	22 10	German.	North German Lloyd.	431.2	56.4	26.0	Talcahuano, Chile.	Hamburg, Germany.	General.	7,270	7,196	4,956
Aachen.	19	3 30	19	6 54	20	00 20	21	22 10	German.	North German Lloyd.	431.2	56.4	26.0	Talcahuano, Chile.	Hamburg, Germany.	General.	7,270	7,196	4,956
Chewink	19	6 57	19	17 40					American.	U. S. Navy	180.0	35.6		Bahboa, C. Z.	Cristobal, C. Z.				
No. 39	19	7 29	19	18 30					American.	U. S. Navy	328.2	45.7		Bahboa, C. Z.	Cristobal, C. Z.				
Bushnell	19	7 35	19	18 30					American.	U. S. Navy	231.0	20.0		Bahboa, C. Z.	Cristobal, C. Z.				
S-14	19	7 35	19	18 30					American.	U. S. Navy	231.0	20.0		Bahboa, C. Z.	Cristobal, C. Z.				
S-16	19	7 35	19	18 30					American.	U. S. Navy	231.0	20.0		Bahboa, C. Z.	Cristobal, C. Z.				
S-10	19	8 39	19	19 25					American.	U. S. Navy	231.0	20.0		Bahboa, C. Z.	Cristobal, C. Z.				
S-11	19	8 39	19	19 25					American.	U. S. Navy	231.0	20.0		Bahboa, C. Z.	Cristobal, C. Z.				

1 Tanker.

20 Motor ship.

21 Sub tender.

22 Submarine.

23 Copper, wine, and nitrates.

24 Submarine.

23 Copper, wine, and nitrates.

22 Submarine.

20 Mine sweeper.

21 Sub tender.

22 Motor ship.

23 Tanker.

S-12 ²²	19	8.48	19	20.25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.		
S-13 ²²	19	8.48	19	20.25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.		
S-17 ²²	19	9.25	19	20.25	American	U. S. Navy	231.0	20.0	Balboa, C. Z.	Cristobal, C. Z.		
Manizales	19	4.15	19	20.40	German	Roland Line	216.5	32.9	Guayaquil, Ecuador	Cristobal, C. Z.	285	1,132
Tamiami	19	7.50	19	21.30	American	Arrow Line	500.0	12.0	Los Angeles, Calif	New York, N. Y.	15,100	11,667
Helen Whittier	19	11.30	19	23.00	American	Rockwell Oil Co.	409.6	54.2	Baltimore, Wash.	Baltimore, Md.	7,000	6,667
Seattle ¹⁵	19	11.45	19	23.37	German	Harburg-American Line	461.5	61.7	Vancouver, B. C.	Hamburg, Germany	7,894	9,267
San Felipe	19	12.15	19	23.37	American	States S. S. Co.	409.8	54.2	Seattle, Wash.	Charleston, S. C.	7,206	6,831
Vagabondia ¹⁹	18	15.00	19	24.30	American	W. J. Mellon	201.0	34.1	Galapagos Islands	Miami, Fla.	4,927	4,927
Chester ²⁴	19	14.47	19	23.05	American	U. S. Navy	582.0	12.0	Balboa, C. Z.	Cristobal, C. Z.		929
Port												
Frementele ²⁴	19	16.45	19	24.43	British	Com'th & Dom. Line.	477.4	63.4	Sydney, Australia.	London, England.	8,800	10,652
Corinto	19	19.10	19	20.12	American	Panama Mail S. S. Co.	261.1	40.0	Champerico, Gust.	Cristobal, C. Z.	1,612	2,352
Mississippi ²⁵	20	6.17	20	17.25	American	U. S. Navy	624.0	97.6	Balboa, C. Z.	Cristobal, C. Z.		
Raleigh	20	6.40	20	18.00	American	U. S. Navy	550.0	55.0	Balboa, C. Z.	Cristobal, C. Z.		
Antares	20	7.34	20	19.10	American	U. S. Navy	390.0	34.0	Balboa, C. Z.	Cristobal, C. Z.		
Rail No. 26 ²⁶	20	7.38	20	19.10	American	U. S. Navy	180.6	35.7	Balboa, C. Z.	Cristobal, C. Z.		
Contocook	20	7.43	20	19.10	American	U. S. Navy	149.3	30.0	Balboa, C. Z.	Cristobal, C. Z.		
No. 36 ²⁷	20	8.16	20	20.45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 157 ²⁸	20	8.16	20	20.45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 159 ²⁸	20	8.16	20	20.45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 74 ²⁸	20	8.38	20	20.45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 160 ²⁸	20	8.38	20	20.45	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
Sandpiper	20	8.50	20	22.05	American	U. S. Navy	187.0	35.0	Balboa, C. Z.	Cristobal, C. Z.		
No. 31 ²⁹	20	9.03	20	23.55	American	Amer-Hawaiian Line	404.6	53.9	Seattle, Wash.	Boston, Mass.	6,900	6,754
Oregonian	20	9.43	20	21.35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 125 ²⁸	20	9.43	20	21.35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 127 ²⁸	20	9.43	20	21.35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 126 ²⁸	20	10.03	20	21.35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
No. 128 ²⁸	20	10.03	20	21.35	American	U. S. Navy	310.0	30.11	Balboa, C. Z.	Cristobal, C. Z.		
Rigel ²⁸	20	6.20	20	13.31	Norwegian	Strange & Co.	367.5	51.5	N. Westminster, B. C.	London, Conn.	5,605	5,427
Adria ²⁸	20	8.00	20	11.21	German	Atlantic Tank Rederei.	412.6	55.1	La Libertad, Ecua	Antwerp, Belgium.	8,767	6,579
Belay ²⁸	20	11.30	20	22.21	Norwegian	Canad.-Amer. Ship. Co.	319.2	46.4	Vancouver, B. C.	Birkenhead, Eng.	3,868	3,085
Ruahine	20	9.00	20	13.48	British	N. Z. Shipping Co.	480.6	60.3	Lyttelton, N. Z.	London, England.	4,555	11,443
Somme	20	6.40	20	15.37	American	U. S. Army	448.0	58.0	San Francisco, Cal	Brooklyn, N. Y.	148	
Saint Joseph	20	12.30	20	17.56	French	French Line	415.0	50.3	Talcahuano, Chile	Havre, France.	7,483	6,025
Caldas ²⁴	20	13.50	20	17.56	Colombian	National Navigation Co.	116.0	21.1	Buenaventura, Col.	Cristobal, C. Z.	242	211
Omaha ²⁴	20	6.12	21	13.50	American	U. S. Navy	556.0	55.0	Balboa, C. Z.	Cristobal, C. Z.		124
Santa Teresa	20	15.45	21	6.38	American	Grace Line	360.2	51.0	Valparaiso, Chile	New York, N. Y.	3,814	5,726
Milwaukee ²⁴	20	17.10	21	7.52	British	Federal Steam Nav. Co.	400.4	62.5	Bluff, N. Z.	Cristobal, C. Z.	7,063	10,592
Surry	21	8.12	21	20.45	American	U. S. Navy	555.6	51.1	Balboa, C. Z.	London, England.		7,707
Cheimatt ²⁴	21	8.48	21	22.50	American	U. S. Navy	483.1	64.1	Balboa, C. Z.	Cristobal, C. Z.		
Dobbin ²⁴	21	9.09	22	00.15	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.		
No. 248 ²⁸	21	9.09	22	00.15	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.		
No. 244 ²⁸	21	9.09	22	00.15	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.		
No. 241 ²⁸	21	9.16	22	00.30	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.		
No. 233 ²⁸	21	9.16	22	00.30	American	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.		
Point Reyes	20	21.25	21	9.50	American	Gulf-Pac. Redwood Line	324.0	46.2	Seattle, Wash.	New Orleans, La.	3,222	3,984
												2,617

²⁹ Destroyer tender.

³⁰ Lumber and tinned salmon.

³¹ Tanker.

³² Cruiser.

³³ Battleship.

³⁴ Cruiser, copper, nitrate, and lenti.

³⁵ Battleship.

³⁶ Battleship.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
No. 249 33	21	10 36	22	4 05	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 199 33	21	10 36	22	4 05	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 149 33	21	10 36	22	4 05	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 148 33	21	10 45	22	4 45	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 154 33	21	11 16	22	6 00	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 153 33	21	11 16	22	6 00	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 155 33	21	11 29	22	6 20	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
No. 156 33	21	11 29	22	6 20	American.	U. S. Navy.	Balboa, C. Z.	Cristobal, C. Z.									
Theodore Roosevelt 34	21	16 15	21	17 07	22	14 20	Norwegian.	Fred Olsen & Co.	425 5	55 0	27 0	Vancouver, B. C.	London, England.	General.	8,895	7,593	5,637

33 Destroyer.

34 Motor ship.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 15.	Ulua.	United Fruit Co.	Port Limon, Costa Rica.	March 15.	Republic.	United States Lines.	Habana, Cuba.
March 16.	No. 8049 35.	La Crosse Aviation Co.	Laredo via wayports.	March 15.	No. 698-M 35.	Pan American Airways.	Miami via wayports.
March 17.	Darien C-35 35.	Scadta Airplane Co.	Barranquilla via waypts.	March 15.	No. 9888 35.	Pan American Airways.	San Salvador and waypts.
March 17.	Magdalena	Hamburg-American Line.	Hamburg via wayports.	March 15.	Colombia.	Royal Netherlands S. S. Co.	Amsterdam via wayports.
March 17.	Pellerin de la Touche.	French Line.	Have via wayports.	March 15.	Ulua.	United Fruit Co.	New York via Habana.
March 18.	Calamars	United Fruit Co.	New York via wayports.	March 15.	Cristobal	Panama R. R. S. S. Line.	New York via Haiti.
March 18.	Zacapa	United Fruit Co.	New Orleans, La.	March 15.	Heredia.	United Fruit Co.	New Orleans and waypts.
March 18.	No. 144-M 35.	Pan American-Grace Airways	Talara via wayports.	March 18.	No. 670-M 35.	Pan American Airways.	Miami via wayports.
March 18.	No. 669-M 35.	Pan American Airways	Miami via wayports.	March 18.	No. 9664 35.	Pan American Airways.	San Salvador and waypts.
March 18.	No. 9688 35.	Pan American Airways	Barcelona via waypts.	March 18.	Inapaguina 36.	A. Tagaropolos	Colon, Rep. of Panama.
March 19.	Juan Sebastian Elcano	Spanish S. S. Line.	New Orleans and Habana.	March 18.	Magdalena	Hamburg-American Line.	Port Limon, Costa Rica.
March 20.	Contessa.	Colombian S. S. Line.	New Orleans and Habana.	March 19.	Irona.	United Fruit Co.	Port Limon, Costa Rica.
March 20.	Bolivar.	Standard Fruit & S. S. Co.	New York via wayports.	March 19.	No. 309-N 35.	Pan American-Grace Airways.	La Guayra via wayports.
March 20.	Irona.	United Fruit Co.	Port Limon, Costa Rica.	March 19.	Zacapa.	United Fruit Co.	Puerto Colombia.
March 21.	Magdalena	Hamburg-American Line.	Miami via wayports.	March 19.	Calamates	United Fruit Co.	Port Limon, Costa Rica.
March 21.	No. 668-M 35.	Pan American Airways	New Orleans via Habana.	March 19.	Estuero 37.	J. Assmusen	Bluefields, Nicaragua.
March 21.	Parsmina.	United Fruit Co.	San Salvador and waypts.	March 19.	Pellerin de la Touche	French Line.	Have via wayports.
March 21.	No. 9664 35.	Pan American Airways	San Salvador and waypts.	March 20.	Darien C-35 35.	Scadta Airplane Co.	Barranquilla and waypts.
March 21.	No. 309-N 35.	Pan American-Grace Airways	La Guayra via wayports.	March 21.	Bolivar.	Colombian S. S. Line.	New York via Kingston.
March 21.	No. 300-N 35.	Pan American-Grace Airways	Pimental via wayports.	March 21.	Irona.	United Fruit Co.	New Orleans and waypts.
March 21.	Panama	Pan American-Grace Airways	Colon, Rep. of Panama.	March 21.	Contessa.	Standard Fruit & S. S. Co.	New Orleans and waypts.
March 21.	Annetta I 36.	A. Tagaropolos	Colon, Rep. of Panama.	March 21.	Annetta I 36.	A. Tagaropolos	Colon, Rep. of Panama.
March 21.	Carmelia 37.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	March 21.	Carmelia 37.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.

35 Air mail carrier.

36 Motor boat.

37 Other than ships passing through the Canal.

(Continued on page 504, column 2.)

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 20, 1931.

No. 856.

Central America, Salvador, Amapala Point Light, reported extinguished. The following is quoted from Daily Memorandum No. 6873 of the Hydrographic Office, Washington, D. C., dated March 9, 1931:

The second officer of the Swedish M. S. *Annie Johnson* reports that Amapala Point Light was observed to be extinguished on February 14, 1931 at 5.20 a. m., and again on February 17, 1931 at 7 p. m.

Approximate position: Lat. 13° 09' 12" N., long. 87° 54' 10" W.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 21, 1931.

No. 859.

Colombia, approaches to Cartagena, Salmedina Bank Light Vessel, light reported extinguished. The following message was received by the Hydrographic Office at Cristobal:

The master of the American S. S. *Bolivar* reports that on the night of March 18, 1931, the light on Salmedina Bank Light Vessel was extinguished.

Approximate position: Lat. 10° 23' 10" N., long. 75° 38' 42" W.

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending March 21, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons
La Perla.....	United Fruit Co.....	March 7.....	March 7.....		154
City of San Francisco.	Panama Mail S. S. Co.....	March 8.....	March 8.....	78	
Nora.....	Arrow Company.....	March 8.....	March 9.....	13,095	
San Jose.....	United Fruit Co.....	March 9.....	March 10.....	41	
Guatemala.....	Panama Mail S. S. Co.....	March 10.....	March 10.....	18	3
Triumph.....	Roosevelt S. S. Co.....	March 10.....	March 11.....	164	
Chateau Thierry.....	U. S. Government.....	March 10.....	March 10.....	278	149
Colombia.....	Panama Mail S. S. Co.....	March 11.....	March 12.....	59	
La Placentia.....	Union Oil Co.....	March 11.....	March 13.....	12,319	30
Laguna.....	Pacific Steam Navigation Co.....	March 13.....	March 13.....		8
Nosa Queen.....	N. O. & S. A. S. S. Co.....	March 13.....	March 13.....	191	
City of San Francisco.	Panama Mail S. S. Co.....	March 15.....	March 15.....		72
Santa Elisa.....	Grace Line.....	March 15.....	March 15.....	148	15
Santa Clara.....	Grace Line.....	March 16.....	March 16.....	3	1
Saramacca.....	United Fruit Co.....	March 16.....	March 17.....	118	
Margaret Johnson.....	Johnson Line.....	March 16.....	March 16.....	86	
Northumberland.....	Federal Steam Navigation Co.....	March 16.....	March 16.....	34	
Manizales.....	Roland Line.....	March 19.....	March 19.....	1	
Samuel Bakke.....	Knutsen Line.....	March 19.....	March 19.....		50
Abraham Lincoln.....	Fred Olsen & Co.....	March 19.....	March 21.....	2,293	3
Santa Barbara.....	Grace Line.....	March 20.....	March 20.....	1	5
President Harrison.....	Dollar Line.....	March 20.....	March 20.....		4
Pennsylvania.....	Panama-Pacific Line.....	March 20.....	March 20.....		171
Santa Teresa.....	Grace Line.....	March 20.....	March 21.....	1	

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., April 1, 1931.

No. 35.

Canal Traffic During March.

During the month of March, 1931, 439 commercial vessels and 12 small nonseagoing launches transited the Canal. Tolls on the commercial vessels aggregated \$1,964,434.22, and on the launches \$45.33, or a total tolls collection of \$1,964,479.55.

The daily average of commercial vessels was 14.16, and the daily average of tolls collected was \$63,368.85, as compared with an average of 15.39 transits and \$68,425.10 in tolls for the previous month, and an average of 16.61 transits and \$72,903.30 in tolls for March, 1930. The average amount of tolls paid by each of the commercial transits was \$4,474.79, as compared with \$4,388.35 for the month of March, 1930. The daily average of both transits and tolls in the past month were the lowest of any month in the current fiscal year.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 9 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 9 months of the fiscal years 1930 and 1929:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
Total, first 9 months of fiscal year 1931.....	4,248	18,886,246.53	15.50	68,927.91
Total, first 9 months of fiscal year 1930.....	4,739	20,580,233.88	17.29	75,110.34
Total, first 9 months of fiscal year 1929.....	4,846	20,421,937.10	17.68	74,532.62

In comparison with the first 9 months of the fiscal year 1930, the corresponding period this year has had 491 fewer transits and \$1,693,987.35 less tolls, decreases of 10.4 per cent and 8.2 per cent, respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., March 31, 1931.

No. 862.

Central America, Nicaragua, Corinto Harbor, caution advised. The following message was received from the Hydrographic Office at Washington, D. C., through the Balboa Radio Station:

Due to an earthquake in Nicaragua, mariners are warned to exercise caution in approaching Corinto.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, March 28, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.		Gross.	Net.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Rhein ²	20	23	20	22	3	50	22	12	32	22	15	33	German	Hamburg-American Line	453.0	58.0	16.9	Hamburg, Germany	Valparaiso, Chile...	General	2,154	8,071	5,952																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Corinto	20	5	00	22	5	40	22	15	49	22	16	45	American	Panama Mail S. S. Co.	261.0	40.0	13.6	Cristobal, C. Z.	Acajuba, Salvador.	General	54	2,352	1,549																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Dramatis ¹	21	14	55	22	6	15	22	17	40	22	18	33	British	T. & J. Harrison	410.0	52.3	17.5	Liverpool, England	Vancouver, B. C.	Ballast	6,202	4,154																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Jackab	21	14	55	22	6	15	22	17	40	22	18	33	British	T. & J. Harrison	410.0	52.3	17.5	Liverpool, England	Vancouver, B. C.	Ballast	6,202	4,154																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
West Cape	22	7	20	22	7	45	22	18	12	22	19	18	American	Lockenbach Line	434.0	57.7	22.6	New Orleans, La.	Tacoma, Wash.	General	3,046	7,982	5,922																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
West Notus	22	13	50	23	00	35	23	9	42	23	10	45	American	McCormick S. S. Co.	409.5	54.0	18.0	Philadelphia, Pa.	Seattle, Wash.	General	3,244	6,566	4,960																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Mobile City	22	21	05	23	6	15	23	15	35	23	16	35	American	McCormick S. S. Co.	410.0	54.3	19.1	Buenos Aires, Arg.	Vancouver, B. C.	General	3,067	6,583	5,014																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
City of	23	1	30	23	7	00	23	15	59	23	17	00	American	Isthmian S. S. Lines	395.0	55.0	21.6	Baltimore, Md	Vancouver, B. C.	Steel, general	5,167	7,330	5,241																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Roubais	23	5	45	23	8	00	23	17	00	23	18	15	British	Amer. & Australian Line	456.0	58.0	26.0	New York, N. Y.	Bunbury, Australia	General	3,759	9,037	6,517																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Betterton ¹	23	11	35	23	15	05	24	9	34	24	10	49	American	Cities Service Corp.	431.0	59.2	21.8	New York, N. Y.	San Francisco, Cal.	Ballast	7,863	5,104																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Australia ¹	23	11	45	24	6	25	24	15	57	24	17	00	American	The Texas Co.	509.7	70.3	24.2	Pt. Arthur, Texas	Cebu, P. I.	Kerosene	2,563	12,514	8,427																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
El Salvador	22	17	20	24	7	15	24	16	42	25	00	37	American	Panama Mail S. S. Co.	360.2	51.6	23.5	New York, N. Y.	San Francisco, Cal.	General	2,314	5,710	4,011																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Henderson ¹	23	12	40	24	8	05	24	17	38	26	4	28	American	U. S. Navy	483.10	61.7	21.0	Hampton Bds, Va.	San Francisco, Cal.	General	760																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Lasbek	23	15	45	24	9	10	24	18	10	24	19	10	German	Alberto D. Marulanda	281.7	44.0	16.0	Charleston, S. C.	Tumaco, Colombia.	Salt	1,950	2,571	1,837																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Importer	24	6	40	24	9	05	24	18	38	24	19	55	British	Can. Nat. Steamships	400.0	52.0	16.6	St. Johns, N. B.	Vancouver, B. C.	General	955	5,891	4,186																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Nicoline	24	6	45	24	9	50	24	19	09	24	20	21	Danish	Isbrandtsen Moller Co.	374.8	52.2	22.6	Chester, Pa.	Manila, P. I.	General	4,625	5,928	4,483																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Maersk ²	24	9	00	24	10	45	24	19	33	25	1	20	Norwegian	Anglo-Saxon Pet. Co.	441.0	57.0	26.0	Dublin, Ireland	San Francisco, Cal.	Ballast	3,672	7,589	5,212																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Lochgoil ²	23	16	45	25	00	01	25	10	56	25	13	05	British	Royal Mail S. P. Co.	485.0	62.3	23.5	Rotterdam, Holld	Vancouver, B. C.	General	581	10,803	7,606																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
St. Michel ¹	23	17	50	25	1	50	25	11	59	25	13	05	American	U. S. Army	439.9	58.0	25.2	Brooklyn, N. Y.	San Francisco, Cal.	General	3,840	6,858	5,308																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Tanager ²	23	22	15	25	3	35	25	13	11	25	14	25	Norwegian	Westfal Larsen & Co.	398.1	54.8	19.10	Buenos Aires, Arg.	Vancouver, B. C.	Corn, coffee, etc.	3,094	6,755	4,873																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
San Bernardino	24	1	30	25	5	00	25	14	45	25	15	30	American	Queker Line	410.5	54.2	18.6	New York, N. Y.	Seattle, Wash.	General	7,264	6,567	4,909																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Texmar	24	12	10	25	10	15	25	18	46	25	19	51	American	Calmar S. S. Corp.	410.5	54.3	25.6	Baltimore, Md	Seattle, Wash.	General, steel	2,641	6,756	4,775																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Montana	24	16	40	25	10	45	25	19	05	25	19	55	American	Amer-Hawaiian Line	440.6	53.9	17.7	Boston, Mass	Seattle, Wash.	General	2,641	6,756	4,775																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Dorothy	25	1	40	25	12	00	25	19	50	25	20	50	American	Lockenbach Line	448.9	60.2	22.0	Boston, Mass	Seattle, Wash.	General	3,900	9,294	6,861																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Knai Maru ²	25	8	10	25	13	00	25	20	10	25	21	00	Japanese	Osaka Shosen Kaisha	445.0	60.6	22.6	New York, N. Y.	Shanghai, China.	General, tobacco	3,953	8,982	6,272																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Peterson	25	14	10	25	14	20	25	21	55	25	22	05	British	Dale & Co.	400.1	52.4	16.6	Newcastle, Eng.	Vancouver, B. C.	Ballast	5,885	4,144																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Baralt	23	23	55	25	14	25	25	22	00	25	23	05	Dutch	Royal Neth. S. S. Co.	412.0	59.0	20.3	Gibraltar, C. Z.	Emecalcaba, Pena.	General	1,611	1,757	742																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Indiana	24	20	05	26	4	10	26	12	06	26	13	10	French	French Line	208.0	33.0	20.3	Hayre, France	Talcahuano, Chile	General	1,194	1,183	436																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Esparita	24	17	50	26	6	10	26	13	28	26	14	30	American	United Fruit Co.	320.6	44.0	19.6	Gibraltar, C. Z.	San Francisco, Cal.	General	1,333	3,683	2,373																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Angier	25	15	30	26	6	10	26	14	31	26	15	35	German	North German Lloyd	393.0	53.0	19.6	Hamburg, Germany	Valparaiso, Chile	General	1,901	6,542	4,532																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Huguenot ¹	25	17	10	26	7	20	26	15	27	26	16	26	American	Richfield Oil Co.	424.0	53.2	19.6	New York, N. Y.	Los Angeles, Calif.	General	7,391	7,391	5,099																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Svealand ¹	26	7	35	26	8	20	26	16	19	26	20	45	Swedish	Ore S. S. Corp.	561.0	72.2	22.6	Sparrows Pt., Md.	Cruz Grande, Chile	Ballast	15,425																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Chatanooga	26	7	00	26	9	15	26	17	23	26	18	41	American	Norton, Lilly & Co.	424.0	56.0	25.6	Baltimore, Md	Shanghai, China.	General	7,469	7,611	5,450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
City	26	7	00	26	9	15	26	17	23	26	18	41	American	Norton, Lilly & Co.	424.0	56.0	25.6	Baltimore, Md	Shanghai, China.	General	7,469	7,611	5,450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Tanker.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

¹ Tanker.
² Motor ship.
³ Transport.

	19	20	40	26	18	20	26	19	30	German		Roland Line		216.5	33.0	13.3		Cristobal, C. Z.	Guayaquil, Ecuador	General	70	1,132	741
Manizales																							
Singapore																							
Narra-	26	16	30	26	18	30	27	9	26	27	10	29	Japanese		385.0	51.0	19.6		Kobe, Japan	Tobacco, cotton	3,401	5,914	4,426
gaussett ¹	27	8	55	27	11	45	27	18	58	27	20	00	British		425.0	57.0	19.6		Los Angeles, Calif	Ballast		7,020	5,051
Caldas ²	25	12	20	27	11	25	27	20	46	28	00	12	Colombian		116.0	21.0	8.0		Buenaventura, Col.	General	75	211	124
Murder	27	10	25	27	13	10	27	20	44	27	22	02	Belgian		476.0	60.9	17.0		Vancouver, B. C.	Ballast		8,771	6,292
Washington	27	2	10	27	13	35	27	21	41	27	22	40	French		470.0	61.2	20.3		Vancouver, B. C.	General	1,510	10,332	7,475
Mandinga ⁴	27			27			27	13	50				American						Gatun, C. Z.	Towing barges		8	
Ordencia	27	15	05	28	2	10	28	9	08	28	11	28	British		511.6	62.0	23.6		Talcahuano, Chile	General	1,573	12,417	8,305
Orazio ²	26	13	05	28	3	15	28	10	33	28	11	28	Italian		452.0	62.0	27.0		Talcahuano, Chile	General	1,641	12,977	9,373
Santa Inez ²	27	23	55	28	5	50	28	13	55	28	18	40	American		370.0	53.2	22.9		Valparaiso, Chile	General	2,551	6,255	4,016
Sheaf Crown	27	16	45	28	6	40	28	15	02	29	1	35	British		405.0	54.6	21.6		New Caledonia	Coal and coke	6,619	7,128	5,506
Nelson																			Seattle, Wash.	General		2,448	4,133
Traveler	27	22	50	28	7	00	28	15	55	28	16	57	American		380.0	53.1	16.7		Wellington, N. Z.	Gen., explosives	2,704	11,170	8,208
Port Hunter	28	11	50	28	12	05	28	19	25	28	23	00	British		481.0	62.3	20.2		Vancouver, B. C.	Ballast	1,158	9,633	6,998
Pacific	27	17	35	28	12	50	28	20	15	28	21	30	British		435.0	60.6	24.0		Portland, Oreg	Ballast		6,626	4,977
Exportor ²	28	15	00	28	19	40	29	9	10	29	10	25	Japanese		409.0	54.0	14.0		Los Angeles, Calif	Ballast		9,734	6,349
Taigen Maru	28	15	40	28	20	30	29	9	55	29	11	04	American		480.0	66.0	26.0		Gatun, C. Z.	(⁵)			
Tidewater ²																			Ballast				
Navy Motor																			Ballast				
No. 1				28			28	14	13				American						Ballast			2	2
No. 2				29			29	14	30				American						Ballast			2	2
No. 3				29			29	14	30				American						Ballast			2	2
No. 4				29			29	14	30				American						Ballast			2	2
No. 5				29			29	14	30				American						Ballast			1	1
No. 7				29			29	14	30				American						Ballast			1	1

1 Tanker.

4 Launch.

5 Towing Sea Scout fleet.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

New Mexico 6,	22	7.57	22	14.20	22	15.55	American...	U. S. Navy	624.0	96.0	Balboa, C. Z.	Cristobal, C. Z.					
Bridge 7,	22	8.25	22	15.35			American...	U. S. Navy	400.0	55.2	Balboa, C. Z.	Cristobal, C. Z.					
Langley 8,	22	9.08	22	16.35	26	6.20	American...	U. S. Navy	520.2	65.2	Balboa, C. Z.	Cristobal, C. Z.					
Brazos 9,	22	9.28	22	17.45	25	23.40	American...	U. S. Navy	475.0	56.0	Balboa, C. Z.	Cristobal, C. Z.					
Trojan Star,	21	16.45	22	10.07	22	18.30	British...	Blue Star Line	493.0	61.6	N. Westm ¹⁰ or, B. C.	Hamburg-Germany	6,363	10,405	7,401		
No. 145 9,	22	10.36	22	19.35	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 142 9,	22	10.36	22	19.35	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 143 9,	22	10.48	22	20.30	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 144 9,	22	10.48	22	20.30	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
Peter Kerr,	21	20.15	22	11.00	22	20.30	American...	States S. S. Co.	415.0	55.6	Portland, Oreg.	London, England	8,452	7,704	5,606		
San Marcos,	21	22.30	22	12.25	23	00.10	American...	Quaker Line	410.0	54.0	Coos Bay, Oreg.	Wilmington, Del.	7,166	6,755	4,895		
Gisla 10,	21	17.15	22	12.25	23	00.10	Norwegian...	Canadian Transp. Co.	360.0	51.0	Vancouver, B. C.	London, England	5,674	5,101	3,735		
Jacob Jones																	
No. 130 9,	22	12.14	22	21.30	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 347 9,	22	13.38	22	23.30	25	11.20	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 210 9,	22	13.38	22	23.30	25	11.20	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 211 9,	22	13.52	22	23.45	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
No. 346 9,	22	13.52	22	23.45	26	5.55	American...	U. S. Navy			Balboa, C. Z.	Cristobal, C. Z.					
1 Tanker,																	
6 Battleship,																	
7 Store ship,																	
8 Airplane carrier,																	
9 Destroyer,																	
10 Motor ship,																	

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Jersey City.	22	8.00	22	14.06	23	1.45	23	3.10	British.	Sir W. R. Smith & Sons.	411.8	55.0	23.0	Vancouver, B. C.	London, England.	General.	8,089	6,952
Ronoke	22	14.15	22	15.04	23	4.40	23	6.00	American.	The Texas Co.	416.8	56.1	25.3	Los Angeles, Calif.	Wilmington, N. C.	Gasoline.	8,485	4,989
Whitney	22	16.37	23	6.20	23	4.10	23	00.01	American.	U. S. Navy.	485.0	61.0		Balboa, C. Z.	Cristobal, C. Z.			
Saratoga	23	5.08	23	17.10	23	17.10	23	11.50	American.	U. S. Navy.	875.0	107.9		Balboa, C. Z.	Cristobal, C. Z.			
Trenton	23	6.20	23	20.35	25	14.55	25	11.50	American.	U. S. Navy.	590.0	55.0		Balboa, C. Z.	Cristobal, C. Z.			
Norfolk	23	7.18	23	21.45	25	11.20	25	11.20	American.	U. S. Navy.	555.0	55.0		Balboa, C. Z.	Cristobal, C. Z.			
Concord	23	8.10	23	23.00	26	9.55	26	9.55	American.	U. S. Navy.	550.0	55.0		Balboa, C. Z.	Cristobal, C. Z.			
N-2	23	8.42	23	23.40	23	9.47	24	1.50	American.	U. S. Navy.	555.0	55.0		Balboa, C. Z.	Cristobal, C. Z.			
Memphis	23	9.47	24	3.20	24	3.20	24	3.20	British.	Staw, Savill & Albion.	482.6	64.3		Wellington, N. Z.	London, England.	General.	6,478	11,819
Coptic	22	15.30	23	10.02	24	4.55	24	6.50	British.	Anglo-Saxon Pet. Co.	426.0	56.0	26.0	Los Angeles, Calif.	Lands End, Eng. ¹⁹	Kerosene.	8,610	7,149
Scottish	22	22.45	23	10.37	24	4.55	24	6.50	British.	Anglo-Saxon Pet. Co.	426.0	56.0	26.0	Los Angeles, Calif.	Lands End, Eng. ¹⁹	Kerosene.	8,610	7,149
Barrat	23	6.50	23	10.50	23	23.55	25	14.25	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	11.3	Buenaventura, Col.	Cristobal, C. Z.	(*)	240	1,182
Willmote	23	13.45	23	14.26	24	6.20	24	6.20	American.	Dixon S. S. Corp.	390.2	54.2	27.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,055	6,162
Canadian	23	14.47	24	7.50	24	7.50	24	7.50	British.	Can. Nat. Steamships.	400.0	52.4	15.0	Auckland, N. Z.	Halifax, N. S.	General.	819	6,228
Lexington	23	14.47	24	7.50	24	7.50	24	7.50	British.	Can. Nat. Steamships.	400.0	52.4	15.0	Auckland, N. Z.	Halifax, N. S.	General.	819	6,228
Northampton	24	6.15	25	9.10	25	18.30	26	6.20	American.	U. S. Navy.	582.0	64.1		Balboa, C. Z.	Cristobal, C. Z.			
Arkansas	24	7.16	24	18.30	26	6.20	26	6.20	American.	U. S. Navy.	554.0	93.2		Balboa, C. Z.	Cristobal, C. Z.			
Salt Lake City	24	8.43	25	9.50	25	17.40	26	17.40	American.	U. S. Navy.	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.			
Bobolink	24	8.37	24	17.40	26	17.40	26	17.40	American.	U. S. Navy.	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.			
No. 20	23	17.10	24	9.62	24	17.58	26	6.00	American.	United Fruit Co.	330.6	44.6	21.0	Balboa, C. Z.	Cristobal, C. Z.	General.	1,376	3,683
Esparita	23	17.10	24	9.62	24	17.58	26	6.00	American.	United Fruit Co.	330.6	44.6	21.0	Balboa, C. Z.	Cristobal, C. Z.	General.	1,376	3,683
Gen. Wm. M. Graham	24	9.15	24	19.30	24	19.30	24	19.30	American.	U. S. Army.	156.0	32.0		Balboa, C. Z.	Cristobal, C. Z.	Lumber, general.	9,397	9,154
Texas	24	3.00	24	9.15	24	19.30	24	19.30	American.	Amer.-Hawaiian Line.	471.0	57.2	28.0	Portland, Oreg.	Boston, Mass.			
Pensacola	24	9.59	25	10.50	25	17.55	26	17.55	American.	U. S. Navy.	570.0	65.2		Balboa, C. Z.	Cristobal, C. Z.			
F. J.	24	4.30	24	10.29	24	20.40	24	20.40	American.	Luckenbach Line.	446.0	56.1	26.0	Seattle, Wash.	Mobile, Ala.	General.	4,978	8,508
Stemmesdahl	24	9.45	24	10.46	24	21.25	24	22.15	Norwegian.	Inter-Freighting Corp.	376.5	53.8	24.0	Tacoma, Wash.	Norfolk, Va.	Nitrates.	7,350	6,256
Robin No. 3	24	10.46	24	20.40	25	11.50	26	11.50	American.	U. S. Navy.	188.0	35.4		Balboa, C. Z.	Cristobal, C. Z.			
El Cervo	24	11.51	24	22.25	24	22.25	24	22.25	British.	Anglo-Panama Oil Co.	407.4	52.2	26.2	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil.	7,989	6,046
Hedron	24	7.00	24	12.09	24	23.20	24	23.20	American.	Weyerhaeuser Tim. Co.	440.0	56.0	27.0	Everett, Wash.	Newark, N. J.	Lumber.	9,600	8,312
Robert	24	11.30	24	12.33	25	00.05	25	00.05	American.	Luckenbach Line.	445.0	58.0	27.0	Portland, Oreg.	Boston, Mass.	Lumber, general.	9,483	8,695
Dixie Arrow	24	12.50	24	13.35	25	1.35	25	1.35	American.	Standard Transp. Co.	468.3	62.7	29.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,268	9,744
Pennsylvania	24	15.55	25	6.20	25	18.40	25	18.40	American.	The Texas Co.	416.8	56.1	27.0	Whittling, Calif.	Whittling, Del.	Gasoline.	8,253	6,756
Sun	25	00.33	25	6.54	25	20.30	26	20.30	American.	Sun Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	13,487	9,620

¹⁹ Mine planter.²⁰ Mine sweeper.²¹ Mine sweeper.²² Mine sweeper.²³ Mine sweeper.²⁴ Mine sweeper.²⁵ Mine sweeper.²⁶ Mine sweeper.²⁷ Mine sweeper.²⁸ Mine sweeper.²⁹ Mine sweeper.³⁰ Mine sweeper.³¹ Mine sweeper.³² Mine sweeper.³³ Mine sweeper.³⁴ Mine sweeper.³⁵ Mine sweeper.³⁶ Mine sweeper.³⁷ Mine sweeper.³⁸ Mine sweeper.³⁹ Mine sweeper.⁴⁰ Mine sweeper.⁴¹ Mine sweeper.⁴² Mine sweeper.⁴³ Mine sweeper.⁴⁴ Mine sweeper.⁴⁵ Mine sweeper.⁴⁶ Mine sweeper.⁴⁷ Mine sweeper.⁴⁸ Mine sweeper.⁴⁹ Mine sweeper.⁵⁰ Mine sweeper.⁵¹ Mine sweeper.⁵² Mine sweeper.⁵³ Mine sweeper.⁵⁴ Mine sweeper.⁵⁵ Mine sweeper.⁵⁶ Mine sweeper.⁵⁷ Mine sweeper.⁵⁸ Mine sweeper.⁵⁹ Mine sweeper.⁶⁰ Mine sweeper.⁶¹ Mine sweeper.⁶² Mine sweeper.⁶³ Mine sweeper.⁶⁴ Mine sweeper.⁶⁵ Mine sweeper.⁶⁶ Mine sweeper.⁶⁷ Mine sweeper.⁶⁸ Mine sweeper.⁶⁹ Mine sweeper.⁷⁰ Mine sweeper.⁷¹ Mine sweeper.⁷² Mine sweeper.⁷³ Mine sweeper.⁷⁴ Mine sweeper.⁷⁵ Mine sweeper.⁷⁶ Mine sweeper.⁷⁷ Mine sweeper.⁷⁸ Mine sweeper.⁷⁹ Mine sweeper.⁸⁰ Mine sweeper.⁸¹ Mine sweeper.⁸² Mine sweeper.⁸³ Mine sweeper.⁸⁴ Mine sweeper.⁸⁵ Mine sweeper.⁸⁶ Mine sweeper.⁸⁷ Mine sweeper.⁸⁸ Mine sweeper.⁸⁹ Mine sweeper.⁹⁰ Mine sweeper.⁹¹ Mine sweeper.⁹² Mine sweeper.⁹³ Mine sweeper.⁹⁴ Mine sweeper.⁹⁵ Mine sweeper.⁹⁶ Mine sweeper.⁹⁷ Mine sweeper.⁹⁸ Mine sweeper.⁹⁹ Mine sweeper.¹⁰⁰ Mine sweeper.

Happy Days 15 21.	24	19.45	25	7.05	25	22.02	26	8.25	American...	Ira C. Copley	181.1	27.1	11.0	Los Angeles, Calif.	Habana, Cuba.	Ballast.	563
Ketuku Maru.	24	20.00	25	8.04	25	21.50	26	23.45	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	27.0	Manila, P. I.	East coast, U.S.A.	Sugar, hemp.	7,744
Yomachichi 15.	25	1.00	25	9.50	25	22.30	26	22.30	American.	Roosevelt S. S. Co.	402.0	54.0	27.0	Balboa, C. Z.	Houston, Texas.	Ballast.	6,996
Poseidon.	25	1.10	25	10.25	25	23.40	26	22.40	German.	Hamburg-American Line	450.8	57.0	26.0	Corral, Chile.	Hamburg, Germany.	General.	7,684
Orbita.	25	1.10	25	10.25	25	23.40	26	22.40	British.	Pacific Steam Nav. Co.	550.3	67.3	27.0	Talcahuano, Chile.	Liverpool, England.	(21)	7,030
Tai Ping 15.	24	21.05	25	11.51	26	1.20	26	1.20	Norwegian.	Barber S. S. Corp.	461.9	60.6	25.0	Dayao, P. I.	New York, N. Y.	General.	16,844
Portmar.	25	8.30	25	12.14	26	2.35	26	2.35	American.	Calmor S. S. Corp.	409.8	54.2	25.0	Seattle, Wash.	New York, N. Y.	Pulp, lumber.	9,894
Pacific Trader 15.	25	2.40	25	12.40	26	4.05	26	4.05	British.	Furness-Pacific Line.	420.0	58.7	24.0	Vancouver, B. C.	London, England.	General.	7,427
Medavia 15.	25	10.00	25	13.06	26	6.15	26	9.40	British.	Donaldson Bros., Ltd.	387.0	53.7	26.2	Vancouver, B. C.	London, England.	Fruit, general.	7,979
Enador.	25	13.35	26	6.23	26	15.05	27	9.25	American.	Panama Mail S. S. Co.	380.6	48.2	23.0	San Francisco, Cal.	New York, N. Y.	General.	6,382
Nosa King.	25	22.58	26	6.55	26	15.50	26	18.40	American.	N. O. & S. A. S. S. Co.	324.0	46.2	21.3	San Antonio, Chile.	New Orleans, La.	Beans, nitrates.	6,719
Intrepid 15 21.	25	7.00	26	7.00	26	14.45	26	14.45	American.	W. P. Murphy.	167.0	34.0	17.0	Balboa, C. Z.	East coast, U.S.A.	Ballast.	9,978
Guayaquil.	26	4.35	26	7.34	26	16.45	26	15.00	American.	Panama R. R. S. S. Line.	251.0	43.6	17.1	Guayaquil, Ecuador	New York, N. Y.	General.	3,616
Charles R.	26	7.00	26	8.04	26	16.45	26	16.45	American.	Munson, McCorkle Line.	401.4	53.2	26.0	Puget Sd., Wash.	Baltimore, Md.	Lumber, general.	1,393
McCormick.	26	7.50	26	9.12	26	18.35	26	18.35	American.	Shepard S. S. Co.	409.8	54.2	24.1	Seattle, Wash.	Boston, Mass.	Lumber, general.	2,874
Sage Brush.	26	7.50	26	9.12	26	18.35	26	18.35	British.	Pacific Steam Nav. Co.	215.7	33.6	14.0	Champerico, Guat.	Cristobal, C. Z.	General.	7,082
Acapulco.	26	9.30	26	9.45	26	17.40	26	17.40	British.	Pacific Steam Nav. Co.	215.7	33.6	14.0	Champerico, Guat.	Cristobal, C. Z.	General.	5,167
Durazzo.	26	9.30	26	10.35	26	18.50	26	2.15	German.	Hamburg-American Line	227.5	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	6,602
Amerikaland 15.	26	20.15	27	6.00	27	18.55	27	18.55	Swedish.	Ore S. S. Corp.	561.0	72.0	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	1,273
Hermimus.	26	20.35	27	6.35	27	20.30	27	22.45	British.	Shaw, Savill & Albion.	476.6	63.1	25.0	Auckland, N. Z.	Baltimore, Md.	General.	4,331
San Francisco.	27	00.30	27	7.20	27	21.40	28	14.15	French.	French Line.	431.1	57.2	26.0	Portland, Oreg.	Le Havre, France.	Frozen, general.	6,625
Hawaiian.	27	7.40	27	8.21	27	22.00	27	22.00	American.	Amer-Hawaiian Line.	404.6	53.9	27.0	Pt. Towns'd, Wash.	Boston, Mass.	General.	7,708
Annie.	27	6.35	27	9.12	27	19.15	27	21.25	Swedish.	Johnson Line.	392.0	52.6	26.0	Vancouver, B. C.	Stockholm, Sweden.	(24)	6,115
Johnson 15.	27	8.10	27	14.10	27	22.55	27	23.30	American.	Gulf Pac. Redwood Line.	386.8	52.2	16.1	Los Angeles, Calif.	New Orleans, La.	(25)	6,650
Dio.	27	17.10	27	17.51	28	2.25	28	13.15	British.	Pacific Steam Nav. Co.	303.0	43.0	20.0	Tocopilla, Chile.	New York, N. Y.	Copper ore.	5,708
Ontarioite 15 25.	28	3.00	28	6.27	28	18.15	28	21.55	British.	Imperial Oil Co., Ltd.	470.0	63.2	28.0	Talara, Peru.	Halifax, N. S.	Crude oil.	2,997
Henry D.	28	3.00	28	6.27	28	18.15	28	21.55	British.	Imperial Oil Co., Ltd.	470.0	63.2	28.0	Talara, Peru.	Halifax, N. S.	Crude oil.	2,844
Whiton.	28	2.30	28	7.15	28	18.30	28	18.30	American.	Dutton Lumber Corp.	356.0	51.6	26.0	Puget Sd., Wash.	Poughkeepsie, N. Y.	Lumber.	5,400
Eir.	28	5.30	28	8.15	28	19.20	28	19.20	Norwegian.	Inter. Freightng Corp.	399.5	53.0	27.0	Antofagasta, Chile.	Mobile, Ala.	Nitrates.	5,367
West Nilius.	28	12.15	28	13.15	28	20.45	28	20.45	American.	McCormick S. S. Co.	410.5	54.3	23.0	Vancouver, B. C.	Buenos Aires, Arg.	Lumber, general.	8,000
Hull 21.	28	12.15	28	13.15	28	20.45	28	20.45	Panamanian.	A. Valentinos				Balboa, C. Z.	Cristobal, C. Z.	Ballast.	6,581

21 Tanker.

22 Yacht.

23 Launch.

24 Copper, metals, sugar, etc.

25 Wheat, fruit, and general.

26 Lumber, sugar, and general.

27 All boats, excepted on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* DEPARTURES.

* ARRIVALS.

Date.	Vessel.	From—	Date.	Vessel.	Line.	For—
March 22.	Calamares	United Fruit Co.	March 22.	No. 9688 27.	Pan American Airways	San Salvador and waypts.
March 22.	Kungsbohm.	Swedish-American Line	March 22.	No. 666-M 27.	Pan American Airways	Miami via waypts.
March 22.	Camden.	United Fruit Co.	March 22.	Magdalena.	Hamburg-American Line.	Hamburg via waypts.
March 22.	Inapaquina 26.	Colon, Rep. of Panama.	March 22.	Calamares.	United Fruit Co.	New York via Habana.
March 23.	Darien C-35 27.	Santa Airplane Co.	March 23.	Pariminta.	United Fruit Co.	New Orleans and waypts.
March 23.	Tamaha.	Standard Oil Co.	March 23.	Inapaquina 26.	A. Tagaropoulos	Colon, Rep. of Panama.
March 24.	Ynezuela.	Royal Dutch S. S. Co.	March 23.	Juan Sebastian Elcano	Spanish S. S. Line.	Barcelona via waypts.
March 24.	Almeria Lykes.	Lykes Brothers S. S. Co.	March 23.	Camden.	United Fruit Co.	Curacao via Port Limon.

* Other than ships passing through the Canal.

26 Motor boat.

27 Air mail carrier.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.						
* ARRIVALS.			From—		Vessel.		Line.		For—		
Date.	Vessel.	Line.	From—		Date.	Vessel.	Line.		For—		
March 24.	No. 144-M ²⁸	Pan American-Grace Airways.	Pimental via waypoints.		March 23.	Kingsholm	Swedish-American Line.		New York via waypoints.		
March 24.	No. 731-M ²⁸	Theodore Gildred	San Diego via waypoints.		March 24.	Almeria Lykes	Lykes Brothers S. S. Co.		Galveston and waypoints.		
March 25.	Acon	Panama R. R. S. S. Line.	New York via Haiti.		March 25.	Tamahua	Standard Oil Co.		Tampico, Mexico.		
March 25.	Tolosa	United Fruit Co.	New York via waypoints.		March 25.	No. 9664 ²⁸	Pan American Airways.		San Salvador and wayp'ts.		
March 25.	Santa Maria	United Fruit Co.	New York via Kingston.		March 25.	No. 668-M ²⁸	Pan American Airways.		Miami via waypoints.		
March 25.	No. 670-M ²⁸	Pan American Airways	Miami via waypoints.		March 25.	Venezuela	Royal Netherlands S. S. Co.		Port Limon, Costa Rica.		
March 25.	No. 9688 ²⁸	Pan American Airways	San Salvador and wayp'ts.		March 26.	Santa Maria	Pan American Airways.		La Guayra via waypoints.		
March 26.	Tela	United Fruit Co.	New Orleans and wayp'ts.		March 26.	Tolosa	United Fruit Co.		Port Limon via waypoints.		
March 26.	Baracoa	Colombian S. S. Line.	New York via waypoints.		March 26.	Tela	United Fruit Co.		Port Limon, Costa Rica.		
March 27.	C-44 ²⁸	Sadta Airplane Co.	New Orleans via waypoints.		March 27.	Darwin C-35 ²⁸	Seadta Airplane Co.		Bocas, Rep. of Panama.		
March 27.	Cafalu	Elders & Effries Line.	Avenmouth via waypoints.		March 27.	Baracoa	Colombian S. S. Line.		Barranquilla via wayp'ts.		
March 27.	Carmelita	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.		March 27.	Inapacina ³⁰	A. Tagaropulos		New York via Kingston.		
March 27.	Inapacina ³⁰	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.		March 27.	Carmelita ²⁹	Standard Fruit & S. S. Co.		Colon, Rep. of Panama.		
March 27.	Amnetta I. ³⁰	A. Tagaropulos	Colon, Rep. of Panama.		March 28.	Amnetta I. ³⁰	A. Tagaropulos		Colon, Rep. of Panama.		
March 28.	Venezuela	Royal Netherlands S. S. Co	Port Limon, Costa Rica.		March 28.	Pearl Marie ²⁹	G. I. Bryan		Bluefields, Nicaragua.		
March 28.	Tela	United Fruit Co.	Bocas, Rep. of Panama.		March 28.	Tela	United Fruit Co.		New Orleans and wayp'ts.		
March 28.	No. 145-M ²⁸	Pan American Airways	La Guayra via waypoints.		March 28.	Cafalu	Standard Fruit & S. S. Co		New Orleans and wayp'ts.		
March 28.	No. 662-M ²⁸	Pan American Airways	Miami via waypoints.		March 28.	Cavina	Elders & Effries Line		Avenmouth via Kingston.		
March 28.	No. 9664 ²⁸	Pan American Airways	San Salvador and wayp'ts.		March 28.	Venezuela	Royal Netherlands S. S. Co		Amsterdam via waypoints.		
March 28.	No. 300-N ²⁴	Pan American-Grace Airways.	Pimental via waypoints.		March 28.	Venezuela	Royal Netherlands S. S. Co		Amsterdam via waypoints.		
²⁸ Air mail carrier. ²⁹ Motor schooner. ³⁰ Motor boat.					PORT OF BALBOA.						
March 24.	Ginyo Maru	Nippon Yusen Kaisha.	Hongkong, China.		March 24.	Ginyo Maru.	Nippon Yusen Kaisha.		Valparaiso, Chile.		
March 24.	Supreme ³¹	Van Camp Seafood Co	Panama Bay, R. P.		March 24.	Supreme ³¹	Van Camp Seafood Co.		Panama Bay, R. P.		
March 25.	Supreme ³¹	Van Camp Seafood Co	Panama Bay, R. P.		March 25.	Supreme ³²	Van Camp Seafood Co.		Panama Bay, R. P.		
March 25.	Real ³²	Hans Elliot.	Panama Bay, R. P.		March 25.	Real ³²	Hans Elliot.		Panama Bay, R. P.		
March 26.	Nueva Panama ³¹	Hans Elliot.	Panama Bay, R. P.		March 26.	Nueva Panama ³¹	Hans Elliot.		Panama Bay, R. P.		
March 26.	Supreme ³¹	Van Camp Seafood Co.	Panama Bay, R. P.		March 26.	Supreme ³¹	Van Camp Seafood Co.		Panama Bay, R. P.		
³¹ Motor ship. ³² Motor schooner.					* Other than ships passing through the Canal.						

Visit of Chilean Battleship.

The battleship *Almirante Latorre*, of the Chilean Navy, arrived at Cristobal from Plymouth, England, on March 28, 1931, and transited the Canal on the following day to Balboa where she will be tied up several days before departing for Valparaiso. The vessel, which was recently laid up in England for general overhaul, is 625 feet in length, 92 feet 5 inches beam, and had a salt-water draft at the time of transit of 27 feet 5 inches. She is of 28,000 tons displacement and paid \$14,000 in tolls at the rate of 50 cents per displacement ton. The *Almirante Latorre* is the largest vessel in the Chilean Navy and carries normally a crew of 1,167 officers and men. At this time she has a reduced complement, 530 officers and men.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending March 28, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Corinto.....	Pacific Mail S. S. Co.....		March 22.....		98
Parismina.....	United Fruit Co.....		March 22.....		47
Magdalena.....	Hamburg-American Line.....		March 22.....		1,055
Theodore Roosevelt.....	Fred Olsen Line.....	March 22.....	March 22.....	(¹)	298
Calamarcas.....	United Fruit Co.....	March 22.....	March 22.....	14	466
Camden.....	United Fruit Co.....	March 22.....	March 23.....	4,946	(²)
Gisla.....	Canadian Transport Co.....	March 22.....	March 23.....	166	(²)
El Salvador.....	Panama Mail S. S. Co.....	March 22.....	March 24.....	133	853
Juan Sebastian Elcano.....	Spanish S. S. Line.....		March 23.....		353
Taranger.....	Westfal, Larsen & Co.....	March 23.....	March 24.....	(¹)	128½
Lochgail.....	Pacific Steam Navigation Co.....	March 23.....	March 24.....	233	(²)
Baralt.....	Royal Netherlands S. S. Co.....	March 23.....	March 25.....	240	160½
Tamaha.....	Standard Oil Co. of N. Y.....	March 23.....	March 25.....	9,270	(²)
San Bernardino.....	Quaker S. S. Line.....	March 24.....	March 25.....	281	(²)
Almeria Lykes.....	Lykes Brothers.....	March 24.....	March 25.....	195	(²)
Venezuela.....	Royal Netherlands S. S. Co.....	March 24.....	March 25.....	105	(²)
Indiana.....	French Line.....	March 24.....	March 26.....	139	(⁴)
Esparta.....	United Fruit Co.....	March 24.....	March 26.....	1,498	167
Orbita.....	Pacific Steam Navigation Co.....	March 25.....	March 25.....	20	1
Ansgr.....	North German Lloyd.....	March 25.....	March 26.....	131	19
Santa Marta.....	United Fruit Co.....	March 25.....	March 26.....	487	148
Tolosa.....	United Fruit Co.....	March 25.....	March 26.....	389	33
Ancon.....	Panama R. R. S. S. Line.....	March 25.....	March 25.....	2,601	
Caldas.....	National Navigation Co.....	March 25.....	March 27.....	(¹)	77
Manizales.....	North German Lloyd.....		March 26.....		64
Guayaquil.....	Panama R. R. S. S. Line.....	March 26.....	March 26.....	140	81
Ecuador.....	Pacific Mail S. S. Co.....	March 26.....	March 27.....	821	12
Tela.....	United Fruit Co.....	March 26.....	March 26.....	556	53
Baracoa.....	United Fruit Co.....	March 26.....	March 27.....	436	158½
Durazzo.....	Hamburg-American Line.....	March 26.....		434	
Acajutla.....	Pacific Steam Navigation Co.....	March 26.....		221	
Orazio.....	Italian S. S. Line.....	March 26.....	March 28.....	233	27
Washington.....	French Line.....	March 27.....	March 27.....	62	139
Oreoma.....	Pacific Steam Navigation Co.....	March 27.....	March 28.....	77	329
Cefalu.....	Standard Fruit & S. S. Co.....	March 27.....	March 28.....	70	489
San Francisco.....	French Line.....	March 27.....	March 28.....	146	81½
Santa Inez.....	Grace Line.....	March 27.....	March 28.....	86	267
Pacific Exporter.....	Furness, Withy & Co.....	March 27.....	March 28.....	(¹)	506
Alvarado.....	Pacific Steam Navigation Co.....	March 28.....	March 28.....	(¹)	15
Tela.....	United Fruit Co.....	March 28.....	March 28.....	129	272
Pearl Marie.....	R. Feuillebois.....	March 28.....	March 28.....	(¹)	25
Venezuela.....	Royal Netherlands S. S. Co.....	March 28.....	March 28.....	(¹)	792

¹ No cargo discharged.² No cargo laded.³ One case.⁴ One package.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.....	March 31.....	April 5.....	April 8.....	April 12.....	April 15.....	April 20.
Ancon.....	April 14.....	April 19.....	April 22.....	April 26.....	April 29.....	May 4.
Cristobal ¹	April 28.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.
Ancon.....	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.
Ancon.....	July 7.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.
Ancon ²	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.

¹ Effective April 28th, steamers sail daylight saving time.

² Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 8, 1931. No. 36.

Preliminary Designs for Madden Dam Completed.

Preliminary designs for the Madden Dam, prepared by the United States Bureau of Reclamation in consultation with the designing engineer of The Panama Canal, have been completed and a preliminary announcement has been issued to contractors who may be interested in submitting bids. It is expected that the detailed plans and specifications will be completed in time to permit advertising for bids about July 1, 1931.

The Madden Dam, which is to be located on the Chagres River above Alhajuela, is to be constructed to meet the increasing demand for water for lockages and power, and municipal purposes. The main features of construction will consist of the main dam across the Chagres River, the power plant, the left ridge dam, and 13 saddle dams.

The main dam is to be a straight gravity type concrete dam, consisting of an overflow spillway section across the river and of right and left abutment sections. These three sections will be similar in design except for the special requirements of the spillway section. The toe of the spillway section will be extended approximately 120 feet to form a concrete apron at the downstream end of which a dentated sill will be provided. The dam will be built in sections about 56 feet in length, so formed at the ends as to key together. The maximum height of the dam from the lowest point of the foundation to the top of roadway will be about 220 feet. A sluiced clay blanket will be placed on the stripped bedrock for almost the full width of the spillway section and for a distance of 150 feet upstream. Concrete aprons will be placed on the bedrock immediately upstream from the abutment sections, these varying in length from 150 feet, where they join the clay blanket, to 20 feet at the ends of the abutments.

The spillway will be divided into four openings by three piers, and structural steel drum gates 18 feet by 100 feet long will be installed on the concrete crests in these openings. The bridge over the spillway will consist of flat concrete arches spanning the gate openings. Outlets through the dam will consist of six openings formed in the lower part of the spillway section, and of two plate steel discharge pipes installed in the abutment section at the power plant location. These latter will be located between and alternatively with the three power penstocks. Each opening through the spillway section will be controlled by two hydraulically operated slide gates arranged in tandem. The flow through each of the discharge pipes in the abutment section will be regulated by an 84-inch needle valve installed in the power house at the outlet end. The inlets of all conduits through the dam including power penstocks will be protected by concrete and structural steel trash racks.

A hydroelectric power plant, 100 feet by 45 feet, is to be constructed immediately downstream from the river end of the left abutment section, the substructure of which will be monolithic with the concrete in the dam. The power plant will consist of three units, each of about 8,000 kilowatts capacity. Only two units will be installed with the construction of the dam. The third may be installed later, when needed.

The left ridge dam and the saddle dams will consist of earth and gravel, and rock fills. The upstream face of the left ridge dam will be protected by concrete paving, and the Madden Road will be carried on its crown and then over the main dam. Two of the larger saddle dams will have a concrete core wall and their upstream face will be protected by igneous rock riprap.

Tanker Traffic Through the Panama Canal in March, 1931.

During the month of March, 1931, 65 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 361,940, on which tolls of \$312,473.78 were paid. Cargo amounted to 302,793 tons, which included 295,043 tons of mineral oils and 7,750 tons of molasses.

In point of net tonnage, tanker traffic decreased 18.5 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 29.6 per cent.

Tank ships comprised 14.8 per cent of the total commercial transits through the Canal during the month; made up 16.4 per cent of the total Panama Canal net tonnage; were the source of 15.9 per cent of the tolls collected; and carried 15.8 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of March, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for March, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	6	29,715	\$21,456.96	.....
Danzig.....	1	6,127	4,411.44	.....
French.....	1	5,001	3,600.72	.....
German.....	2	6,508	5,304.53	3,789
Norwegian.....	2	11,083	7,979.76	.....
United States.....	23	134,986	101,609.39	5,593
Total, March, 1931.....	35	193,420	144,362.80	9,382
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, January, 1931.....	32	178,858	139,549.63	45,185
Total, March, 1930.....	40	209,588	152,605.22	6,907
<i>Pacific to Atlantic.</i>				
British.....	5	26,545	28,083.75	51,077
Danzig.....	2	14,015	13,347.50	24,600
French.....	1	5,050	5,445.00	8,947
German.....	2	6,508	6,182.48	8,767
Norwegian.....	2	10,616	11,305.00	19,793
United States.....	18	105,786	103,747.25	* 180,227
Total, March, 1931.....	30	168,520	168,110.98	293,411
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, January, 1931.....	46	244,211	251,904.56	428,081
Total, March, 1930.....	47	234,310	240,982.05	423,247

* Includes 7,750 tons of molasses.

The following tabulation shows the tanker traffic through the Canal during March, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	22	126,559	\$92,560.64	3,000
United States to South America.....	1	4,326	3,114.72	.....
United States to Philippine Islands.....	1	8,427	9,048.75	2,593
South American intercoastal.....	1	6,127	4,411.44	.....
Cristobal to United States.....	1	4,459	3,210.48	.....
West Indies to Balboa.....	1	1,934	2,011.25	3,789
Europe to United States.....	7	37,014	26,712.24	.....
Europe to South America.....	1	4,574	3,293.28	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	16	95,433	95,547.50	172,477
United States to West Indies.....	1	6,050	4,356.00	.....
United States to Europe.....	5	24,896	26,363.75	44,368
South America to United States.....	1	4,326	4,633.75	7,939
South America to Canada.....	3	20,877	20,598.75	40,810
South America to Europe.....	2	10,701	11,375.09	20,067
Balboa to West Indies.....	1	1,934	1,392.48	.....
Hawaiian Islands to United States.....	1	4,303	3,843.75	* 7,750

* Molasses.

Of the tanker traffic passing through the Canal in March, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for March, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
March, 1931.....	26	146,574	\$107,033.60	3,000
February, 1931.....	25	137,361	98,899.92	.....
January, 1931.....	22	124,796	95,151.23	18,325
March, 1930.....	31	177,371	127,753.83	.....
<i>From Los Angeles.</i>				
March, 1931.....	20	115,950	115,424.75	199,722
February, 1931.....	23	128,221	134,310.20	239,521
January, 1931.....	33	176,803	183,017.85	310,902
March, 1930.....	40	203,457	208,169.55	364,974

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 1, 1931.

No. 863.

Colombia, north coast, Cartagena, lights extinguished. The master of the French S. S. *Guadeloupe* reports the following lights and buoys extinguished or missing on March 30, 1931:

1. Saimecina Bank Lightship; light extinguished.
2. Boca Chica Entrance, north buoy; light extinguished.
3. Capreya Shoal Light Buoy; missing.
4. Santa Cruz Bank Light Buoy; light extinguished.
5. Castilla Grande Point, southern buoy; missing.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 4, 1931.

No. 865.

Panama, Pacific Coast, Bahia Honda, Penoso Point, shoal reported. The following is quoted from Notice to Mariners No. 13, Washington, D. C., dated March 28, 1931:

The navigating officer of the U. S. S. *Dobbin* reports that an uncharted shoal extends 350 yards 28° from Penoso Point with a depth of 1½ fathoms at low tide at the outer end, falling away rapidly to 6 and 7 fathoms in the direction of Chinche Island. The navigator also reports that there are indications that this shoal extends 250 yards 330° from the 1½ fathom spot mentioned above.

Approximate position: 7° 44' 00" N., 81° 32' 00" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, April 4, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.		Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	Gross.	Net.
Durazo.....	26	18.50	29	00.35	29	10.18	29	23.04	German.....	227.0	34.0	18.10	Cristobal, C. Z.	Guayaquil, Ecuador	General.....	209	1,533	1,041
Orari.....	28	17.30	29	21.15	29	11.04	29	20.09	N. Z. Shipping Co.	471.0	67.0	25.0	Liverpool, England	Timaru, N. Z.	General.....	5,648	12,792	8,980
Pacific Pine.....	28	21.10	29	3.40	29	12.05	29	13.15	Dimon S. S. Corp.	410.5	54.3	17.0	Philadelphia, Pa.	Tacoma, Wash.	General.....	2,826	6,583	4,808
Remoura.....	28	17.20	29	5.15	29	13.05	29	18.50	N. Z. Shipping Co.	485.0	62.3	27.6	London, England	Bluff, N. Z.	General.....	3,560	11,911	8,945
Comet.....	28	21.50	29	6.15	29	13.52	29	14.45	Standard Oil Co.	480.0	65.0	21.4	New York, N. Y.	Los Angeles, Calif.	Ballast.....		9,820	6,750
Almirante.....	28	14.25	29	8.00	29	17.00			Chilean Government.	625.0	107.0	27.5	Plymouth, Eng.	Valparaiso, Chile	Ballast.....	3,346	7,380	5,339
Alaskan.....	29	2.00	29	8.40	29	16.43	29	17.45	Amer.-Hawaiian Line.	415.0	53.7	19.5	Boston, Mass.	Portland, Ore.	General.....	3,789	3,012	1,934
Julius.....	29	6.45	29	10.30	29	17.50			Anglo-Saxon Pet. Co.	309.7	45.5	20.0	Curacao, D. W. I.	Balboa, C. Z.	Gas oil.....	2,250	6,190	4,569
Silverash.....	29	14.20	29	15.15	29	22.35	30	00.37	Silver Line.	425.0	58.3	17.9	New York, N. Y.	San Francisco, Cal.	Ballast.....	4,680	5,708	4,138
Nordbo.....	29	21.00	30	1.00	30	9.38	30	11.00	Inter. Freight Co.	380.0	54.0	18.2	New York, N. Y.	Antofagasta, Chile	General.....	4,689	5,708	4,138
Subotawan.....	30	00.05	30	6.20	30	14.08	30	22.40	Swayne & Hoyt.	386.8	52.2	20.5	Houston, Texas	Seattle, Wash.	Pipe, general.....	6,083	6,616	4,614
Buenaventura.....	30	5.00	30	14.30	30	22.06	30	23.38	Panama R. R. S. Line	251.0	43.0	17.10	New York, N. Y.	Guayaquil, Ecuador	General.....	544	5,673	3,592
Ipswich.....	30	17.05	30	19.10	31	9.47	31	10.59	Argonaut S. S. Line.	400.7	54.2	25.0	Baltimore, Md.	Seattle, Wash.	General.....	4,022	6,603	4,903
Toronto.....	30	16.25	30	20.23	31	10.30	31	11.40	Canadian Transp. Co.	380.0	52.0	18.1	Salt City, Utah	Vancouver, B. C.	Salt.....	3,486	6,310	4,827
Mallard.....	30	16.25	30	10.15	30	16.03			U. S. Navy.	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....		283	101
Charles.....	31	00.25	31	2.55	31	12.00	31	13.20	Arrow Line.	409.7	54.2	19.6	Baltimore, Md.	Seattle, Wash.	General.....	4,022	6,603	4,903
Christenson.....	30	13.15	31	6.15	31	14.16	31	15.15	White Star Line.	400.0	58.0	24.3	Falmouth, England	N. Plymouth, N. Z.	Ballast.....	3,486	6,310	4,827
Galle.....	30	23.50	31	8.35	31	17.00	31	23.05	Pac.-Atlantic S. Co.	409.6	54.2	18.0	Wilmington, Del.	Seattle, Wash.	General.....		18	12
Invada.....	23	10.35	31	9.10					Robert Buchanan.	43.0	11.0	9.6	Brixham, England	New Zealand.....	Ballast.....		283	101
El Panquaco.....	31	10.55	31	10.55					Panamanian Govt.	125.0	23.0		Colon, R. F.	Gatun Lake, C. Z.	Ballast.....		283	101
City of.....	31	10.55	31	10.55					Panamanian Govt.	125.0	23.0		Colon, R. F.	Gatun Lake, C. Z.	Ballast.....		283	101
Swasea.....	31	12.25	31	13.05	31	20.50	31	22.54	Ellerman & Bucknall.	400.0	52.0	20.6	New York, N. Y.	Sydney, Australia.	General.....	3,659	6,014	4,353
Kreta.....	30	20.40	31	00.01	31	9.02	31	12.09	Hamburg-American Line	309.3	44.1	20.6	Hamburg, Germany	Champerico, Guat.	General.....	1,330	3,387	2,337
Georgian.....	31	23.00	31	1.15	31	10.08	31	11.20	Amer.-Hawaiian Line.	434.3	57.7	16.0	Boston, Mass.	Seattle, Wash.	General.....	1,934	7,953	5,912
Tai Shan.....	31	23.00	31	1.15	31	11.02	31	11.55	Barber S. S. Line.	461.0	60.6	21.6	New York, N. Y.	Shanghai, China.	General.....	3,867	9,570	6,967
Cape Horn.....	1	6.35	1	7.10	1	14.03	1	16.25	Cuban Sugar Refin. Co.	425.0	56.0	17.6	Cardenas, Cuba	Los Angeles, Calif.	Sugar.....	5,000	6,813	4,838
Acadula.....	26	17.40	1	9.35	1	17.18	1	18.29	Pacific Steam Nav. Co.	215.7	34.0	14.5	Cristobal, C. Z.	Champerico, Guat.	General.....	470	1,273	706
S-48.....	1	9.45	1	9.45	1	17.10			U. S. Navy.	240.0	21.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.....			
K. I.....	1	9.00	1	10.25	1	18.06	1	19.04	Luckenbach Line.	446.0	56.0	24.0	Boston, Mass.	Seattle, Wash.	General.....	4,306	8,552	6,286
Luckenbach.....	1	3.20	1	11.55	1	19.50			N. O. & S. A. S. S. Co.	324.0	46.2	22.3	New Orleans, La.	Talcahuano, Chile	General.....	3,106	3,993	2,510
Nosa Prince.....	1	11.40	1	12.00	1	19.48			Swayne & Hoyt.	320.0	46.0	20.6	New Orleans, La.	San Francisco, Cal.	General.....	3,302	3,993	2,612
Point Star.....	1	11.40	1	12.00	1	19.48			Standard Oil Co.	488.3	62.7	22.0	New York, N. Y.	Los Angeles, Calif.	Ballast.....	9,841	6,946	
Empire Arrow.....	1	3.00	1	13.00	1	20.52	1	22.18										
Spencer.....	1	19.40	2	1.20	2	10.25			Kellogg S. S. Co.	391.8	51.3	20.0	New York, N. Y.	San Francisco, Cal.	Ballast.....	5,601	3,902	
Kellogg.....	1	19.40	2	1.20	2	10.25												

* Submarine.

* Transport.

* Yacht.

* Mine sweeper.

* Battleship.

* Motor ship.

* Tanker.

San Mateo.....	31	19	00	2	6	25	2	14	03	3	12	40	American	United Fruit Co.	315	2	44	2	18	0	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,409	2,141
Willard.....	2	5	20	2	7	35	2	14	37	2	15	45	American	Williams S. S. Line	386	3	52	2	22	0	Baltimore, Md.	Tacoma, Wash.	General	3,506	5,681
Hilo.....	31	19	00	2	6	40	2	15	06	2	15	45	Norwegian	Panama Mail S. S. Co.	214	0	34	0	24	0	Cristobal, C. Z.	Gambou, C. Z.	Ballast	1,081	722
Takaoka Maru.....	2	7	30	2	8	35	2	15	46	2	16	40	Japanese	Nippon Yusen Kaisha	443	0	58	0	30	0	Philadelphia, Pa.	Kobe, Japan	General	4,895	1,188
California.....	2	5	50	2	12	55	2	20	03	2	21	05	Italian	Nav. Libera-Tristina	523	0	63	9	22	0	Genoa, Italy	Vancouver, B. C.	General	683	9,836
Northern Sun ¹	2	14	20	2	14	30	2	21	38	2	22	30	American	Sun Oil Co.	480	6	63	0	17	0	Chester, Pa.	Los Angeles, Calif.	Ballast	9,761	6,649
Northern Sun ²	2	5	40	2	15	45	2	22	30	3	18	05	American	Grace Line	483	3	63	9	25	7	New York, N. Y.	Talcahuano, Chile	General	2,521	11,680
E. J. Hooper ¹	2	.....	.....	2	.....	.....	2	16	49	.....	.....	.....	American	E. J. Hooper	.....	.....	.....	.....	.....	Cristobal, C. Z.	Towing barges	3	15	.....
No. 4114 ²	2	.....	.....	2	.....	.....	2	16	49	.....	.....	.....	American	E. J. Hooper	.....	.....	.....	.....	.....	Cristobal, C. Z.	Unknown	13	15	.....
Schwarzwald.....	2	12	25	3	1	00	3	9	36	3	10	43	German	Hamburg-American Line	399	6	54	0	18	3	Hamburg, Germany	Gatun, C. Z.	General	1,527	6,571
Fairfield.....	2	20	30	3	2	20	3	10	15	3	11	26	American	Isthmian S. S. Lines	309	0	48	2	19	8	Valparaiso, Chile	Gatun, C. Z.	General	3,504	3,393
President.....	3	5	05	3	6	25	3	13	44	3	21	32	American	Dollar Line	502	0	62	2	26	0	Honolulu, T. H.	Round the world	General	3,041	12,063
Hayes.....	3	5	10	3	7	00	3	16	00	4	2	20	American	Panama-Pacific Line	574	4	80	3	26	8	San Francisco, Cal.	San Francisco, Cal.	General	2,871	34,506
California.....	3	7	10	3	8	15	3	16	31	3	17	40	British	Kerr S. S. Co.	450	0	61	0	20	0	New York, N. Y.	Buenaventura, Col.	General	3,046	9,311
Silverwillow ²	29	15	35	3	13	45	3	22	15	4	3	10	Colombian	National Navigation Co.	107	0	62	0	10	2	Cristobal, C. Z.	Singapore, Str. Set.	General	253	161
Cauca ²	3	12	30	3	14	30	3	23	30	3	22	45	American	The Texas Co.	416	0	56	0	20	8	New York, N. Y.	Los Angeles, Calif.	Ballast	262	4,841
New York ¹	3	12	30	3	14	30	3	23	30	3	22	45	American	The Texas Co.	416	0	56	0	20	8	New York, N. Y.	Los Angeles, Calif.	Ballast	262	4,841
Swan ¹	3	7	00	3	7	00	3	13	50	3	13	50	American	U. S. Navy	180	0	56	0	20	8	Cristobal, C. Z.	Balboa, C. Z.	Ballast	180	6,775
Naples Maru.....	3	15	45	3	20	00	4	9	59	4	11	06	Japanese	Kokusa Kisen Kaisha	385	0	51	0	25	6	Jacksonville, Fla.	Yokohama, Japan	Rosin, cotton	7,105	6,207
Chateau.....	3	12	10	4	1	55	4	9	13	.....	.....	.....	American	U. S. Army	436	0	58	0	25	3	New York, N. Y.	Balboa, C. Z.	General	628	.....
Thierry ⁶	3	12	10	4	1	55	4	9	13	.....	.....	.....	American	U. S. Army	436	0	58	0	25	3	New York, N. Y.	Balboa, C. Z.	General	628	.....
Lena.....	3	19	45	4	6	25	4	14	11	4	15	20	American	Luckenbach Line	425	0	53	7	25	0	Houston, Texas	Seattle, Wash.	General	5,924	7,217
Lukenbach.....	4	6	40	4	7	05	4	14	58	4	16	20	American	Shepard S. S. Co.	409	0	54	0	20	0	Boston, Mass.	Seattle, Wash.	General	4,594	6,588
Wind Rush.....	4	6	35	4	10	10	4	17	47	4	19	00	British	Dale & Co.	440	0	57	5	17	0	Cork, Ireland	Vancouver, B. C.	Ballast	7,679	5,848
Goolistan.....	4	6	35	4	10	10	4	17	47	4	19	00	British	Dale & Co.	440	0	57	5	17	0	Cork, Ireland	Vancouver, B. C.	Ballast	7,679	5,848
Geodhui ²	4	13	40	4	15	25	4	22	10	6	9	40	British	Burns, Phillips Co.	341	9	51	0	21	5	Glasgow, Scotland	Sydney, Australia	Coal, general	2,032	.....

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Western Sun ¹	30	00	40	29	6	12	29	15	30	29	15	30	American	Sun Oil Co.	480	6	66	0	29	Los Angeles, Calif.	Marcus Hook, Pa.	Gasoline	13,151
Mataro.....	29	6	15	29	7	00	29	14	35	30	00	15	British	Shaw, Savill & Albion	500	4	63	2	27	Wellington, N. Z.	London, England	Frozen, general	3,921
Cauca ¹	29	4	40	29	7	15	29	15	35	30	00	15	Colombian	National Navigation Co.	107	0	22	9	0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general	142
Penelope ¹	29	8	20	29	9	04	29	17	15	29	17	15	Danzig	W. Tansschiff Rhedere	470	1	53	9	21	Talari, Peru	Hamburg, Germany	Gasoline	11,300
Edda.....	29	7	50	29	9	04	29	17	15	29	17	15	Italian	General S. S. Corp.	418	9	63	9	21	Seattle, Wash.	Hamburg, Germany	Gasoline	3,078
American Star.....	29	20	55	30	5	48	30	14	00	30	14	00	American	Charles Nelson & Co.	386	8	52	2	24	Portland, Ore.	New York, N. Y.	Lumber, general	6,397
Fella.....	29	21	30	30	7	09	30	15	55	30	21	25	Italian	Nav. Libera-Tristina	436	6	55	4	26	Vancouver, B. C.	Trieste, Italy	Lumber, general	8,728
Nevadan.....	30	7	20	30	8	39	30	16	40	31	1	10	German	North German Lloyd	491	4	63	8	27	Vancouver, B. C.	Bremen, Germany	General	11,000
Schweben.....	30	7	30	30	9	07	30	19	05	30	19	05	American	Amer-Hawaiian Line	460	0	57	8	25	Portland, Ore.	Boston, Mass.	General	7,180
Sancta Maria ¹	30	10	25	30	13	17	30	20	45	31	00	45	American	Grace Line	466	0	64	0	23	Valparaiso, Chile	New York, N. Y.	General	5,670
Julius.....	30	16	32	31	1	45	31	2	00	31	3	10	German	Julius Schindler	309	7	45	5	15	Balboa, C. Z.	Curacao, D. W. I.	Ballast	1,150
Abana.....	30	15	30	30	17	00	31	2	00	31	16	30	German	North German Lloyd	295	3	46	8	14	Champerico, Guatemala	Amsterdam, Holland	General	6,258
Virginia.....	30	11	45	31	6	12	31	15	00	31	16	30	American	Panama-Pacific Line	586	4	50	3	28	San Francisco, Cal.	New York, N. Y.	Gasoline	8,981
Atlantic Sun ¹	30	20	15	31	6	19	31	18	00	31	18	00	American	Sun Oil Co.	429	8	59	2	26	Los Angeles, Calif.	Chester, Pa.	Gasoline	1,031
San Mateo.....	30	15	22	31	7	30	31	18	00	2	6	25	American	United Fruit Co.	315	2	44	21	0	San Francisco, Cal.	Cristobal, C. Z.	Lumber, general	688
Heilo.....	30	19	40	31	7	42	31	19	00	2	7	40	Norwegian	Panama Mail S. S. Co.	214	2	34	3	12	Acajutla, Salvador	Cristobal, C. Z.	Lumber, general	1,158
Atago Maru ¹	30	15	30	31	8	52	31	20	00	31	23	10	Japanese	Nippon Yusen Kaisha	440	2	57	0	27	Iloilo, P. I.	New York, N. Y.	Lumber, general	8,255

1¹ Fresh apples and flour.
2² Motor ship.
3³ Lumber, wheat, and general.
4⁴ Fruits, banana, and general.
5⁵ Coffee, hardwood, and drums.

¹ Coffee, hardwood, and drums.

² Fruits, beans, and general.

³ Lumber, wheat, and general.

⁴ Fresh apples and flour.

⁵ Motor ship.

⁶ Oil, tin, sugar, and general.

⁷ Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.	Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.										Tons.	Gross.	Net.
Lochmonar ¹⁶ .	31	1 30	31	9 02				British.	Royal Mail S. P. Co.	485.6	62.2	30.0	Vancouver, B. C.	Rotterdam, Holld.	General.	9,413	10,772	7,581
Katrina	31	8 50	31	9 47	31	20 30	American.	Luckenbach Line.		446.1	56.1	27.2	Los Angeles, Calif.	Boston, Mass.	General.	6,807	8,508	6,179
Norman Star.	31	11 45	31	12 44	31	21 35	British.	Blue Star Line.		445.2	56.2	26.0	N. Westminster, B. C.	Newcastle, Eng.	General.	4,580	7,517	5,458
Shirvan	31	23 30	1	6 15	1	18 10	British.	Anglo-Saxon Pet. Co.		412.0	58.4	24.3	Pt. San Luis, Calif.	Lands End, Eng. ¹⁹	Gasoline.	6,827		
Ruapehu.	31	18 25	1	6 23	1	17 25	British.	N. Z. Shipping Co.		457.0	58.0	21.5	Dunedin, N. Z.	London, England.	Frozen, general.	3,644	9,079	6,798
Liverpool Maru	31	22 00	1	7 51	1	18 45	Japanese.	Gildemeister & Co.		385.0	51.0	27.3	Salaverry, Peru.	Marselles, France.	Sugar.	7,940	9,919	4,400
Nuolla ¹⁶ .	1	6 00	1	8 44	1	19 40	Swedish.	Grazeberg Oseound.		418.8	55.2	28.3	Vancouver, B. C.	London, England.	Wheat, lumber.	8,500	7,265	5,199
Bessmer City.	1	4 30	1	10 13	1	20 30	American.	Isthmian S. S. Lines.		424.2	56.2	26.0	Kahului, T. H.	New York, N. Y.	Sugar.	8,200	7,011	5,450
Simla ¹⁷ .	29				29		American.	C. W. Meisner.		21.0	7.0		Balboa, C. Z.	Miraflores Lake.	Ballast.	9,261	8,308	5,880
Courageous ¹⁶ .	31	23 50	1	14 38	1	22 45	American.	Roosevelt S. S. Co.		456.1	56.0	28.0	Mamberg, P. I.	New York, N. Y.	General, sugar.	7,511	7,476	5,435
Canada	1	21 30	2	6 03	2	13 50	Swedish.	Johnson Line.		426.9	56.2	26.0	San Francisco, Cal.	Stockholm, Sweden.	General.	7,511	7,476	5,435
Miyadono Maru	1	21 55	2	6 59	2	19 57	Japanese.	Tatsumi Kisen Kaisha.		400.0	52.0	26.0	Seattle, Wash.	New Orleans, La.	Sugar.	8,806	6,099	4,435
Wilkeno.	2	3 40	2	7 40	2	21 35	American.	Williams S. S. Corp.		415.0	55.7	25.3	Seattle, Wash.	Baltimore, Md.	Lumber, general.	8,806	7,750	5,809
Oregon ¹⁶ .	2	3 55	2	8 42	2	23 00	French.	French Line.		470.3	61.2	26.0	Vancouver, B. C.	Rotterdam, Holld.	General.	7,763	10,332	7,465
Ares	2	5 30	2	8 57	2	23 40	Dutch.	Royal Neth. S. S. Co.		340.9	48.2	22.5	Corral, Chile.	Hamburg, Germany	General.	4,600	4,385	3,195
Knute Nelson ¹⁶ .	2	9 50	2	10 50	3	00 35	Norwegian.	Fred Olsen & Co.		435.9	56.2	27.0	Vancouver, B. C.	Oso, Norway.	General.	7,500	8,016	5,856
Calli.	2	9 10	2	11 39	2	23 30	German.	Roland Line.		216.5	32.9	12.0	Guayacuil, Ecuador	Cristobal, C. Z.	General.	335	1,105	698
Orlando ¹⁸ .	2	9 10	2	11 45	2	23 30	German.	North German Lloyd.		48.5	13.5	2.0	Buenaventura, Col.	Paraiso, C. Z.	Ballast.	32	16	
Virgilio ¹⁶ .	2	4 50	2	12 48	2	21 10	Italian.	Nav. Gen. Italiana.		482.8	61.8	24.0	Talcahuano, Chile.	Genoa, Italy.	General.	1,230	12,941	9,329
Robin Adair	3	1 00	3	6 36	3	14 50	American.	Isthmian S. S. Lines.		424.8	55.2	25.0	Seattle, Wash.	Portland, Me.	Lumber, pulp.	7,115	7,470	5,529
Esley City	3	3 30	3	7 08	3	15 50	American.	Isthmian S. S. Lines.		395.5	55.0	26.1	Tacoma, Wash.	Baltimore, Md.	Lumber.	7,632	7,330	5,239
Tejon	3	8 55	3	9 53	3	19 30	American.	Union Oil Co.		425.8	57.0	29.0	Los Angeles, Calif.	Cristobal, C. Z.	Diesel, fuel oils.	10,029	7,218	4,953
Kurama Maru ¹⁶ .	3	9 30	3	10 51	3	19 25	Japanese.	Kokusa Kisen Kaisha.		438.0	58.0	27.0	Manila, P. I.	Boston, Mass.	Sugar, general.	9,459		
Kentuckian	3	12 10	3	13 02	3	20 50	American.	Amer.-Hawaiian Line.		414.5	53.7	27.0	Seattle, Wash.	Boston, Mass.	General.	6,634	7,049	4,941
Caldas ¹⁶ .	3	11 00	3	14 22	3	22 30	Colombian.	National Navigation Co.		116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, platinum.	135	211	124
Sapelo ¹⁶ .	3	18 02	4	3 05	4	7 55	American.	U. S. Navy.		461.6	60.0		Balboa, C. Z.	Baumont, Texas.	Ballast.	3,710	6,254	4,099
Santa Rita ¹⁶ .	3	14 40	4	6 08	4	14 05	American.	Grace Line.		370.0	53.0	23.0	Valparaiso, Chile.	New York, N. Y.	General.	3,710	6,254	4,099
Perna ¹⁶ .	3	23 00	4	7 11	4	15 40	Norwegian.	Anglo-Saxon Pet. Co.		451.1	59.2	27.0	Los Angeles, Calif.	Lands End, Eng. ¹⁹	Gasoline.	10,217		
Manilla	4	6 30	4	8 16	4	17 20	British.	Shaw, Savill & Albion.		477.5	61.3	26.0	Auckland, N. Z.	London, England.	General.	6,551	11,588	8,282
Hazel Branch.	4	9 40	4	10 39	4	19 50	British.	Nauilfus S. S. Co.		400.4	51.2	24.0	Valparaiso, Chile.	Liverpool, England.	General.	6,260	6,208	3,578
No. 1	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 2	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 3	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 4	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 5	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 6	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
No. 7	4		4		4		American.	Cristobal Sea Scouts					Balboa, C. Z.	Cristobal, C. Z.	Ballast.			
City of Panama ¹⁶ .	4	12 15	4	19 21	5	2 35	American.	Panama Mail S. S. Co.		296.1	45.9	18.0	San Francisco, Cal.	Pro. Colombia, Col.	General.	1,104	3,848	2,603

¹⁶ Tanker.¹⁷ Launch.¹⁸ Tug.¹⁹ For orders.²⁰ Refrigerated fruits and metal.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 29.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.	March 29.....	No. 9888 ²²	Pan American Airways.....	San Salvador and wayp'ts.
March 29.....	Cartago.....	United Fruit Co.....	New Orleans and Habana.	March 29.....	No. 670-M ²²	Pan American Airways.....	Miami via wayports.
March 29.....	Anacahuca ²¹	United Fruit Co.....	Colon, Rep. of Panama.	March 29.....	Tolosa.....	United Fruit Co.....	New York via Habana.
March 30.....	Darien C-35 ²¹	Scudra Airplane Co.....	Baranquilla and wayp'ts.	March 29.....	Ancon.....	Panama R. R. S. S. Line.....	New York via Haiti.
March 31.....	Daytonian.....	French S. S. Line.....	St. Nazaire and wayp'ts.	March 29.....	Anacahuca ²¹	United Fruit Co.....	Colon, Rep. of Panama.
March 31.....	Daytonian.....	French S. S. Line.....	Liverpool via wayports.	March 30.....	Cartago.....	United Fruit Co.....	New Orleans and wayp'ts.
April 1.....	No. 144-M ²¹	Pan American-Grace Airways.....	Pimental via wayports.	April 1.....	No. 9888 ²²	Pan American Airways.....	San Salvador and wayp'ts.
April 1.....	Pastores.....	United Fruit Co.....	New Orleans and Habana.	April 1.....	No. 693-M ²²	Pan American Airways.....	Miami via wayports.
April 1.....	Metapan.....	United Fruit Co.....	New Orleans, La.	April 1.....	Guadeloupe.....	French Line.....	Havre via wayports.
April 1.....	No. 9888 ²²	Pan American Airways.....	San Salvador and wayp'ts.	April 1.....	No. 9835 ²²	Pan American Airways.....	Managua, Nicaragua.
April 1.....	No. 668-M ²²	Pan American Airways.....	Miami via wayports.	April 1.....	Daytonian.....	Leyland S. S. Line.....	Santa Cruz del Sur, Cuba.
April 2.....	Bogota.....	Colombian S. S. Line.....	New York via wayports.	April 1.....	Pastores.....	United Fruit Co.....	Port Limon, Costa Rica.
April 2.....	Contessa.....	Standard Fruit & S. S. Co.....	New Orleans and Habana.	April 2.....	Irona.....	United Fruit Co.....	Port Limon, Costa Rica.
April 3.....	Swiftscout.....	Arrow Oil Co.....	Curacao, D. W. I.	April 2.....	No. 394-N ²²	Pan American Airways.....	La Guayra via wayports.
April 3.....	Galea.....	Hamburg-American Line.....	Tampico via wayports.	April 2.....	Metapan.....	United Fruit Co.....	New York via Kingston.
April 3.....	Anneta I. ²¹	P. W. Hamilton.....	Colon, Rep. of Panama.	April 3.....	Bogota.....	Colombian S. S. Line.....	Baranquilla and wayp'ts.
April 3.....	Carmelita ²¹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.	April 3.....	Darien C-35 ²²	Scudra Airplane Co.....	New York via Kingston.
April 4.....	Reliance.....	United Fruit Co.....	Port Limon, Costa Rica.	April 3.....	Carmelita ²¹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.
April 4.....	No. 309-N ²²	Hamburg-American Line.....	New York via wayports.	April 4.....	Contessa.....	Standard Fruit & S. S. Co.....	New Orleans and wayp'ts.
April 4.....	No. 670-M ²²	Pan American Airways.....	La Guayra via wayports.	April 4.....	Irona.....	United Fruit Co.....	New Orleans and wayp'ts.
April 4.....	No. 9885 ²²	Pan American Airways.....	Miami via wayports.	April 4.....	Swiftscout.....	Arrow Oil Co.....	Curacao, D. W. I.
April 4.....	No. 9664 ²²	Pan American Airways.....	Managua via wayports.				
April 4.....			San Salvador and wayp'ts.				

²² Motor boat. ²³ Air mail carrier. ²⁴ Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
March 29.....	Tolosa.....	United Fruit Co.....	Port Limon, Costa Rica.	April 1.....	Frost ²⁴	West India Oil Co, N. Y.....	Talara, Peru.
March 29.....	Cartago.....	United Fruit Co.....	New Orleans and Habana.	April 2.....	Haida ²⁴ ²⁵	Max C. Fleischmann.....	Manzanillo, Mexico.
March 29.....	Anacahuca ²¹	United Fruit Co.....	Colon, Rep. of Panama.	April 3.....	Nueva Panama ²⁴	Haus Elliot.....	Panama Bay, R. P.
March 30.....	Darien C-35 ²¹	Scudra Airplane Co.....	Baranquilla and wayp'ts.	April 3.....	Sambu ²⁶	Haus Elliot.....	Panama Bay, R. P.
March 31.....	Daytonian.....	French S. S. Line.....	St. Nazaire and wayp'ts.	April 3.....	Real ²⁶	Haus Elliot.....	Panama Bay, R. P.
March 31.....	Daytonian.....	French S. S. Line.....	Liverpool via wayports.	April 3.....	Dos Hermanos ²⁶	A. Valdez.....	Panama Bay, R. P.
April 1.....	No. 144-M ²¹	Pan American-Grace Airways.....	Pimental via wayports.	April 3.....	El Libertador ²⁶	A. Valdez.....	Panama Bay, R. P.
April 1.....	Pastores.....	United Fruit Co.....	New Orleans and Habana.	April 4.....	Supreme ²⁴	Van Camp Seafood Co.....	Panama Bay, R. P.
April 1.....	Metapan.....	United Fruit Co.....	New Orleans, La.				
April 1.....	No. 9888 ²²	Pan American Airways.....	San Salvador and wayp'ts.				
April 1.....	No. 668-M ²²	Pan American Airways.....	Miami via wayports.				
April 2.....	Bogota.....	Colombian S. S. Line.....	New York via wayports.				
April 2.....	Contessa.....	Standard Fruit & S. S. Co.....	New Orleans and Habana.				
April 3.....	Swiftscout.....	Arrow Oil Co.....	Curacao, D. W. I.				
April 3.....	Galea.....	Hamburg-American Line.....	Tampico via wayports.				
April 3.....	Anneta I. ²¹	P. W. Hamilton.....	Colon, Rep. of Panama.				
April 3.....	Carmelita ²¹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.				
April 4.....	Reliance.....	United Fruit Co.....	Port Limon, Costa Rica.				
April 4.....	No. 309-N ²²	Hamburg-American Line.....	New York via wayports.				
April 4.....	No. 670-M ²²	Pan American Airways.....	La Guayra via wayports.				
April 4.....	No. 9885 ²²	Pan American Airways.....	Miami via wayports.				
April 4.....	No. 9664 ²²	Pan American Airways.....	Managua via wayports.				
April 4.....			San Salvador and wayp'ts.				

* Other than ships passing through the Canal.

²⁴ Motor ship. ²⁵ Yacht. ²⁶ Motor schooner.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending April 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Gisla.....	Canadian Transport Co.....	March 21.....	March 22.....	350	
Canadian Transporter.....	Canadian National Steamships.....	March 23.....	March 23.....	19	
Esparta.....	United Fruit Co.....	March 23.....	March 24.....	349	
El Salvador.....	Panama Mail S. S. Co.....	March 24.....	March 24.....	24	
Henderson.....	U. S. Government.....	March 24.....	March 26.....	4	25
Ginyo Maru.....	Nippon Yusen Kaisha.....	March 24.....	March 24.....	122	
Tai Ping.....	Barber S. S. Line.....	March 24.....	March 25.....	249	
Ecuador.....	Panama Mail S. S. Co.....	March 25.....	March 26.....	165	
Acajutla.....	Pacific Steam Navigation Co.....	March 26.....	March 26.....	11	
Santa Inez.....	Grace Line.....	March 28.....	March 28.....	17	1
Julius Schwindler.....	Julius Schwindler.....	March 29.....	March 30.....	3,789	
Frost.....	West India Oil Co.....	March 29.....	April 1.....	300	16
Sabotawan.....	Swayne & Hoyt.....	March 30.....	March 30.....	207	
San Mateo.....	United Fruit Co.....	March 30.....	March 31.....	298	
Santa Maria.....	Grace Line.....	March 30.....	March 31.....	2	
Atago Maru.....	Nippon Yusen Kaisha.....	March 30.....	March 31.....	624	
Courageous.....	Roosevelt S. S. Line.....	March 31.....	April 1.....	226	
Nosa Prince.....	N. O. & S. A. S. S. Co.....	April 1.....	April 1.....	242	
California.....	Panama-Pacific Line.....	April 3.....	April 3.....		199

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Density of Water in Balboa and Cristobal Harbors.

Place.	Weight of sea water in ounces per cubic ft.			Rainy season. Average temperature. Degrees F.
	● Average.	Maximum.	Minimum.	
Cristobal (between docks 8 and 9).....	1018	1020	1013	84.0
Balboa (dock 13).....	1011	1021	1005	83.0

(NOTE.—The above is based on two months' observations at Cristobal and Balboa. Average taken at 12-foot depth. Minimum occurred after heavy rain at 3-foot depth at Cristobal and 12-foot depth at Balboa. The weight of a cubic foot of fresh water at 85° F. is 995 ounces.

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., April 15, 1931.

No. 37.

Completion of Gatun Locks Overhaul.

The quadrennial overhaul of the Gatun Locks, which was begun on January 7, 1931, was completed on April 9, and normal operation from 7 a. m. to 11 p. m. was resumed on April 11. As in previous overhauls, one flight of the locks was repaired at a time, leaving the other side to take care of Canal traffic. During the overhaul the Gatun Locks were operated on a 24-hour basis.

In addition to the routine painting and cleaning, 8 miter gates were removed, inspected, and repaired, 19 new cylindrical valves were installed, completing a program of an improved type of valve commenced in the overhaul of these locks in 1927, and all side seals of the rising stem valves were renewed with babbit alloy seals.

The next locks to be overhauled will be Pedro Miguel and Miraflores during the dry season of 1933.

Comparison of Canal Traffic in March, 1931, with March Traffic in Previous Years.

Commercial traffic through the Canal during the month of March, 1931, was the lowest March traffic in number of transits since 1925 when 398 vessels were passed through the Canal. Cargo tonnage was the lowest carried in any March period since 1922, which was just prior to the beginning of heavy mineral oil traffic through the Canal. In comparison with March, 1930, traffic for the past month declined 76 transits (14.8 per cent); 293,925 net tons (11.7 per cent); and 642,731 cargo tons (25.1 per cent); and in comparison with March, 1929, showed a decrease of 97 transits (18.1 per cent); 356,027 net tons (13.9 per cent); and 828,261 cargo tons (30.2 per cent).

In the tabulation below are shown the number of transits, net tonnage, Panama Canal measurement, and the tons of cargo carried through the Canal during the month of March each year from 1915 to 1931, inclusive, and, for comparison, the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of March.			Fiscal year.	Average per month for fiscal year.		
	Commercial transits.	Panama Canal net tonnage.	Tons of cargo.		Commercial transits.	Panama Canal net tonnage.	Tons of cargo.
1915	137	475,984	607,276	1915	102	361,197	465,567
1916	4	327	1	1916	63	199,687	257,843
1917	146	458,842	571,417	1917	150	483,213	588,213
1918	176	583,249	661,256	1918	172	547,839	627,669
1919	155	477,871	504,985	1919	160	510,416	576,385
1920	235	819,362	894,516	1920	206	712,170	781,208
1921	255	1,112,818	1,084,563	1921	241	951,323	966,601
1922	234	975,811	960,089	1922	228	951,455	907,075
1923	409	1,988,192	1,940,928	1923	331	1,550,482	1,630,656
1924	429	2,136,079	2,272,472	1924	436	2,179,073	2,249,559
1925	398	1,964,106	2,104,324	1925	389	1,904,596	1,996,570
1926	506	2,398,694	2,607,046	1926	433	2,064,549	2,169,787
1927	496	2,413,999	2,533,525	1927	456	2,185,651	2,312,351
1928	542	2,441,077	2,428,662	1928	538	2,454,886	2,469,226
1929	536	2,567,961	2,743,768	1929	534	2,468,483	2,555,250
1930	515	2,505,859	2,558,238	1930	515	2,498,385	2,502,519
1931	439	2,211,934	1,915,507	1931	472	2,361,760	2,154,139

* Canal opened August 15, 1914.

* Average for 10½ months.

* Average for 9 months of fiscal year.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, April 11, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
San Francisco	4	17 50	5	1 10	5	9 05	5	10 00	German.	Hamburg-American Line	432.3	59.0	21.8	Hamburg, Germany	Vancouver, B. C.	General.	4,342	8,454	6,344
Cal.	2	23 30	5	11 19	5	13 10	5	13 10	German.	Round Line	216.3	32.9	12.3	Cristobal, C. Z.	Guayaquil, Ecuador	General.	127	1,105	698
Concor.	4	20 35	5	2 25	5	10 32	5	14 50	Chilean.	R. W. James & Co.	356.4	45.0	19.0	New York, N. Y.	Valparaiso, Calif.	Airplanes.	551	4,421	3,063
Saratoga	5	4 45	5	3 00	5	18 20	5	13 50	American.	U. S. Navy	874.0	107.0		Guantanamo, Cuba	San Diego, Calif.	General.			
Teyon	3	19 30	5	8 20	5	17 31	5	18 35	American.	General Petroleum Co.	425.8	39.8	20.6	Cristobal, C. Z.	Los Angeles, Calif.	Ballast.		7,218	4,953
Missourian	5	1 30	5	9 10	5	18 33	5	19 35	American.	Amer-Hawaiian Line	445.0	59.8	18.8	Boston, Mass.	Portland, Oreg.	General.	3,010	8,567	6,020
Lexington	4	15 25	5	12 00	6	11 00	6	13 50	American.	U. S. Navy	874.0	107.0		Guantanamo, Cuba	Los Angeles, Calif.	Airplanes.			
Devon	5	5 50	5	14 20	6	8 20	6	9 37	British.	Federal Steam Nav. Co.	473.0	59.0	24.10	Glasgow, Scotland	Wellington, N. Z.	Ballast.		9,951	6,801
Five Navy launches																			
Albionstar	5	13 25	5	2 50	5	15 52	5	12 55	American.	U. S. Navy	450.0	58.5	20.0	Cristobal, C. Z.	Gatun, C. Z.	Ballast.		8,317	5,531
Dilworth	5	14 40	6	4 25	6	12 44	6	13 45	British.	Blue Star Line	435.0	56.0	22.0	Newcastle, England	Seattle, Wash.	Ballast.		7,441	5,077
No. 347	5		6	6 00	6	14 20	7	13 50	American.	Shell Oil Co.	340.0	31.0		New York, N. Y.	Los Angeles, Calif.	Ballast.			
No. 210	5		6	6 00	6	14 20	7	13 50	American.	U. S. Navy	310.0	31.0		Guantanamo, Cuba	San Diego, Calif.	Ballast.			
No. 346	4	15 28	6	6 00	6	15 03	7	13 50	American.	U. S. Navy	310.0	31.0		Guantanamo, Cuba	San Diego, Calif.	Ballast.			
No. 211	4	22 20	6	6 00	6	15 03	7	13 50	American.	U. S. Navy	310.0	31.0		Guantanamo, Cuba	San Diego, Calif.	Ballast.			
Janeta	6	5 50	6	6 50	6	15 21	6	16 25	British.	MacLay & McIntyre	402.4	55.1	17.0	North Shields, Eng.	San Diego, Calif.	Ballast.	6,134	4,335	
Lebore	4	18 20	6	9 25	6	17 01	6	18 10	American.	Ore S. S. Corp.	549.0	72.0	23.9	Baltimore, Md.	Vancouver, B. C.	Ballast.	14,325	4,635	
Bullaren	6	10 05	6	10 30	6	17 42	6	20 55	Swedish.	North Brothers	437.0	57.0	24.0	Antwerp, Belgium	Seattle, Wash.	General.	5,600	7,614	5,384
Ludwigshafen	6	00 15	6	11 20	6	21 50	6	23 00	German.	North German Lloyd	383.5	54.3	21.0	Hamburg, Germany	San Antonio, Chile	General.	2,122	6,900	4,622
Chewink	5		6	6 50	6	15 15	6	15 15	American.	U. S. Navy	180.0	35.6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Activo	6	9 05	6	9 05	6	11 41	6	11 41	British.	Pacific Steam Nav. Co.	40.0	10.7		Cristobal, C. Z.	Gatun, C. Z.	Ballast.	12		
Asaroka	6	18 45	6	19 10	7	9 04	7	11 30	American.	McCormick S. S. Co.	409.6	54.1	20.0	Baltimore, Md.	Seattle, Wash.	General.	3,248	6,627	4,993
Haarlem	6	5 55	7	3 10	7	11 16	7	12 15	Dutch.	Royal Neth. S. S. Co.	361.3	50.0	17.6	Hamburg, Germany	Corral, Chile	General.	1,750	4,759	3,660
Siam	6	15 45	7	6 20	7	14 23	7	15 50	Danish.	East Asiatic Co.	410.0	55.0	24.0	Copenhagen, Den.	Vancouver, B. C.	General.	6,197	7,068	5,303
Port Campbell	7	6 15	7	7 10	7	14 43	7	15 50	British.	Com'lth & Dom. Line.	480.0	62.0	22.6	New York, N. Y.	Fremantle, Aust'lia	General.	3,900	10,746	7,939
Hindanger	7	7 30	7	8 55	7	16 38	7	17 35	Norwegian.	Westfal, Larsen & Co.	398.0	54.9	17.0	Rotterdam, Holland	Los Angeles, Calif.	Passengers only		6,854	5,287
Canadian																			
Commander	7	1 22	7	10 05	7	18 20	7	19 35	British.	Can. Nat. Steamships	400.0	52.0	20.6	Halifax, N. S.	Sydney, Australia.	General.	3,028	5,914	4,195
Roanoke	7	9 20	7	11 40	7	18 40	7	21 40	American.	The Texas Co.	417.0	55.0	20.6	Wilmingon, N. C.	Los Angeles, Calif.	General.		6,931	4,999
Troutpool	7	20 25	8	00 15	8	9 23	8	10 39	British.	Can. Co. Wheat Prod'rs	394.0	55.5	15.6	Liverpool, England	Vancouver, B. C.	Ballast.		5,893	4,231
Tryden	8	1 00	8	2 45	8	10 15	8	14 20	American.	Tampa Intercean Co.	430.3	57.7	13.6	New Orleans, La.	Hilo, P. I.	General.	5,686	7,993	5,893
Nome	8	2 35	8	4 20	8	11 46	8	13 45	Norwegian.	Strange & Co.	350.7	50.8	12.0	Baltimore, Md.	Grays Har, Wash.	Ballast.		4,879	3,540
Mexican	8	3 25	8	5 40	8	13 31	8	14 20	American.	Amer-Hawaiian Line	472.3	57.2	17.0	Boston, Mass.	Tacoma, Wash.	General.	2,461	9,258	6,944
Colombia	7	10 40	8	13 35	8	20 35	9	6 29	American.	Panama Mail S. S. Co.	380.0	48.7	23.0	New York, N. Y.	San Francisco, Cal.	Coffee, general.	3,276	6,015	4,281
Drechtidijk	7	19 35	8	14 32	8	21 52	9	1 17	Dutch.	Holland-America Line.	485.0	60.0	20.0	Rotterdam, Holland	Vancouver, B. C.	General, bananas	2,334	10,793	7,619
Benjamin																			
Franklin	7	22 00	8	15 15	8	23 15	10	14 50	Norwegian.	Fred Olsen & Co.	482.0	59.5	23.5	Oslø, Norway	Vancouver, B. C.	General, steel	5,562	9,082	6,140

* General and lubricating oil.

* Launch.

* Mine sweeper.

* Destroyer.

* Aircraft carrier.

* Motor ship.

* Tanker.

* For U. S. S. Lexington.

Walter A. Luckenbach.	8	16.15	8	18.30	9	10.04	9	11.00	American.	Luckenbach Line.	446.0	56.0	23.2	New York, N. Y.	Portland, Oreg.	General	3,311	8,785
Atlanta City.	8	16.20	9	1.25	9	9.20	9	10.13	American.	Norton, Lilly & Co.	424.2	56.2	24.3	Mobile, Ala.	Gagney, P. I.	General	7,042	7,611
Calagrole 1 2	8	16.30	9	6.10	9	11.57	9	12.50	British.	Imperial Oil Co.	521.5	70.4	25.6	Baltimore, Md.	Talara, Peru.	Ballast	12,339	7,717
Steel Inventor.	8	17.45	9	6.00	9	14.45	9	15.45	American.	Isthmian S. S. Lines	425.0	56.0	26.0	Baltimore, Md.	Vancouver, B. C.	Steel, tin, general	7,615	7,811
Steel	8	17.45	9	6.00	9	14.45	9	15.45	American.	Isthmian S. S. Lines	425.0	56.0	26.0	Baltimore, Md.	Vancouver, B. C.	Steel, tin, general	7,615	7,811
Navigator.	8	19.10	9	6.30	9	15.17	9	16.20	American.	Norton, Lilly & Co.	425.0	56.0	26.0	New York, N. Y.	Batavia, Java.	General	7,446	7,611
Marian Otis	9	4.30	9	7.30	9	15.44	9	17.00	American.	Arrow Line	409.6	54.1	15.6	Baltimore, Md.	Seattle, Wash.	General	3,356	6,653
Chandler	9	23.40	9	9.15	9	17.08	9	18.01	American.	Quaker Line	410.5	54.3	18.6	New York, N. Y.	Seattle, Wash.	General	3,268	6,572
Tam Yiente.	9	11.30	9	11.40	9	19.10	9	20.35	American.	Richfield Oil Co.	500.0	71.2	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	11,667	8,542
Somme 1	9	6.30	10	1.35	10	19.12	10	18.00	American.	U. S. Army	436.0	58.0	24.0	Brooklyn, N. Y.	San Francisco, Cal.	General	815	5,928
Jeff Davis 1	10	00.05	10	5.25	10	14.36	10	15.40	American.	Roosevelt S. S. Co., S. B.	395.6	55.0	24.5	Baltimore, Md.	Chinching, China.	Case oil, general	5,528	7,329
Axel Johnson 2	10	5.10	10	6.30	10	15.19	10	20.30	Swedish.	Johnson Line.	409.0	53.0	24.8	Stockholm, Sweden	Honolulu, T. H.	Nitrates, general	6,664	9,642
Teno.	10	1.45	10	9.45	10	16.24	10	17.25	Chilean.	Gia Sud. Amer. de Vap.	421.8	56.0	24.0	New York, N. Y.	Valparaiso, Chile	General	1,333	7,764
Venar	10	5.30	10	10.10	10	18.28	10	19.33	American.	Calmar S. S. Corp.	410.0	55.2	24.0	Baltimore, Md.	Seattle, Wash.	Steel, general	6,492	6,985
Pacific	9	7.10	10	11.15	10	18.59	10	20.00	British.	Furness Withy & Co.	436.0	60.1	18.9	Manchester, Eng.	Vancouver, B. C.	General, bananas	1,084	9,630
Prior 2	9	11.05	10	12.05	10	20.45	12	18.00	American.	Ford Motor Co.	377.0	54.0	20.8	Chester, Pa.	Portland, Oreg.	Auto parts.	2,570	2,758
Lake Ormeo 2	10	11.30	10	12.05	10	19.58	10	21.00	Norwegian.	Fern Line	377.0	54.0	19.3	Houston, Texas	Yokohama, Japan	Cotton, general.	4,203	6,081
Brighton	10	12.55	10	13.35	10	21.34	10	22.55	British.	Dale & Co.	409.6	62.7	20.0	Newcastle, Eng.	Vancouver, B. C.	Ballast	5,729	4,102
Standard	10	12.55	10	13.35	10	21.34	10	22.55	British.	Dale & Co.	409.6	62.7	20.0	Newcastle, Eng.	Vancouver, B. C.	Ballast	5,729	4,102
Arrow 1	10	22.05	11	1.15	11	9.26	11	10.34	American.	Standard Transp. Co.	467.6	62.7	20.0	New York, N. Y.	Los Angeles, Calif.	Ballast	9,698	6,783
Indra 2	10	22.25	11	2.35	11	10.29	11	14.04	Norwegian.	Knut Knutsen	375.8	51.4	19.0	Oslo, Norway	Corral, Chile	General	4,252	5,456
Santa Teresa.	10	22.40	11	4.40	11	10.38	11	15.55	American.	Grace Line	360.2	51.6	22.0	New York, N. Y.	Valparaiso, Chile.	General	1,603	5,726
Yngaren 2	10	23.15	11	7.15	11	13.34	11	14.30	Swedish.	Swedish Trans. S. S. Co.	420.0	54.0	16.0	Gothenburg, Swed	Adelaide, Australia	Paper, general.	588	6,972
Savannah 1 2	10	13.25	11	7.10	11	14.34	13	15.40	American.	U. S. Army	177.0	38.0	13.6	Jacksonville, Fla.	Portland, Oreg.	Ballast	588	6,972
Chile Maru	11	9.10	11	9.25	11	17.43	11	19.05	Japanese.	Kokusa Kisen Kaisha.	385.0	51.0	27.6	Galveston, Texas.	Yokohama, Japan.	Phosp'te, cotton	7,137	5,923
Preyswald 2	10	17.05	11	9.30	11	17.43	11	17.44	German.	Hamburg-American Line	399.4	54.2	18.6	Hamburg, Germany	Valparaiso, Chile.	General	1,453	6,791
Koranton	11	13.00	11	13.20	11	20.00	11	21.00	American.	Amer.-Hawaiian Line	407.7	53.7	20.0	Boston, Mass	Portland, Oreg.	General	3,588	7,107
Caldas 2	11	14.15	11	14.25	11	22.00	11	23.30	British.	Dale & Co.	412.5	53.0	17.0	So. Shields, Eng.	Vancouver, B. C.	Ballast	6,811	4,810
Romant	11	14.15	11	14.25	11	22.00	11	23.30	British.	Dale & Co.	412.5	53.0	17.0	So. Shields, Eng.	Vancouver, B. C.	Ballast	6,811	4,810
Cauca 2	10	22.20	11	14.35	11	22.50	12	2.48	Colombian.	National Navigation Co.	116.0	21.1	9.7	Perme, R. P.	Pro. Armuelles	Rail'd material	200	211
Sanyo Maru 2	10	17.20	11	14.35	11	22.45	12	1.13	Colombian.	National Navigation Co.	107.0	22.0	9.7	Cristobal, C. Z.	Buenaventura, Col.	General	240	262
Suriname.	11	9.20	11	15.30	11	23.44	12	00.55	American.	Oaska Shosen Kaisha.	446.0	60.5	22.0	Chester, Pa.	Shanghai, China.	General	3,775	8,942
Jelling	11	12.35	11	15.35	11	23.44	12	00.55	Danish.	United Fruit Co.	337.0	41.9	19.10	Port Limon, C. R.	San Francisco, Cal.	General, bananas	737	3,667
Sun 2 2	11	18.35	11	18.40	12	9.26	12	10.29	American.	Iabrandsen Moller Co.	285.6	42.2	18.3	Tampico, Mexico.	La Paz, Mexico	Pet. products	1,974	2,649
Ghost 2 2	11	18.35	11	18.40	12	9.26	12	10.29	American.	Sun Oil Co.	480.6	66.0	21.6	Chester, Pa.	Los Angeles, Calif.	Ballast	9,620	6,476
										C. W. Wirtz.				Cristobal, C. Z.	Gatun, C. Z.	Ballast	1	1

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Marore.	5	2.00	5	5.51	5	21.25	5	21.25	American.	Bethlehem Steel Corp.	550.0	72.2	34.2	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,160	15,551
Sidney M.	4	14.45	5	6.37	5	21.59	5	21.59	American.	United Fruit Co.	336.7	41.9	18.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general	664	3,667
Hauptman.	4	23.30	5	7.27	5	23.30	6	22.30	American.	Munson, McCorkle Line.	410.4	53.2	28.0	Everett, Wash.	Baltimore, Md.	Lumber, general.	7,929	7,082
Juan Sebastian	1	17.00	5	10.00	5	23.15	5	23.15	Spanish.	Spanish Government Co.	269.6	28.6	20.0	San Diego, Calif.	New York, N. Y.	Trailing ship.		
Bonneville 1 2	5	13.30	5	14.11	6	00.20	6	1.05	Norwegian.	Roosevelt S. S. Co., S. B.	386.3	54.2	25.0	Sydney, Australia.	New York, N. Y.	General	7,373	6,680
Swan No. 34 1 2	5	13.48	6	00.20	6	00.20	6	00.20	American.	U. S. Navy				Balboa, C. Z.	Cristobal, C. Z.			
1 2 Tug.																		
1 2 Motor ship.																		
1 2 Tug.																		
1 2 Tug.																		

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1 2 Tug.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Nature.	Tons.			Gross.	Net.			
Mathew	5	17	20	5	18	35	6	2	45	American.	Luckenbach Line.	434.3	57.7	21.0	Portland, Oreg.	Mobile, Ala.	General.	4,000	7,977	5,764
Texas	6	3	30	6	6	29	6	15	25	American.	The Texas Co.	415.8	56.1	27.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,412	6,782	4,937
Cumberland	5	21	55	6	7	16	6	16	30	British.	Federal Steam Nav. Co.	520.0	64.2	23.2	Pt. Chalmers, N. Z.	London, England.	General.	5,036	12,930	9,300
Edmore	6	4	58	6	8	28	6	17	25	American.	Tampa Intercoast Co.	409.6	54.2	27.1	Manila, P. I.	New York, N. Y.	Sugar.	8,700	7,486	5,852
K. R.	6	7	59	6	9	39	6	18	20	American.	Shell Oil Co. of Calif.	440.0	58.2	28.1	Los Angeles, Calif.	Fall River, Mass.	(¹⁶) Gasoline.	9,777	9,033	5,938
Kingbury	6	14	45	6	15	58	7	1	20	American.	The Texas Co.	416.8	56.1	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	8,496	6,932	5,041
Reaper	6	18	20	6	19	13	7	17	25	British.	Com Int & Dom. Line.	470.0	58.2	23.0	Wellington, N. Z.	London, England.	Frozen, general.	8,146	9,336	6,582
Chateau	7	8	00	7	9	35	7	15	55	American.	U. S. Army.	448.0	56.0	26.5	Balboa, C. Z.	New York, N. Y.	Crude oil.	12,428	8,646	6,024
Emma	6	22	20	7	6	16	7	16	25	Danish.	Standard Shipping Co.	466.0	61.6	27.0	Talara, Peru	Halifax, N. S.	Crude oil.	7,626	6,235	4,486
Maersk	7	21	10	7	7	32	7	17	20	Swedish.	Richardson & Co.	378.0	54.2	24.4	Vancouver, B. C.	Falmouth, Eng.	Wheat.	8,591	8,567	6,020
Rosen	7	1	50	7	8	32	7	18	20	American.	Amer-Hawaian Line	445.1	59.8	26.0	Portland, Oreg.	Boston, Mass.	General.	8,417	9,725	6,942
California	6	21	20	7	8	51	7	19	05	British.	Furness, Withy & Co.	436.0	60.3	27.0	Vancouver, B. C.	London, England.	General.	7,300	7,003	5,406
Pacific Ranger	7	8	00	7	9	35	7	19	45	British.	Reardon Smith Line	400.5	54.3	25.0	Vancouver, B. C.	Manchester, Eng.	General.	7,800	6,213	4,672
Quebec City	7	8	15	7	9	53	7	21	45	Japanese.	Kokusai Kisen Kaisha.	385.0	51.0	27.0	Mamboquid, P. I.	East coast U. S. A.	Sugar.	2,644	3,984	2,643
Maru	7	10	00	7	11	06	7	22	10	American.	Swayne & Hoyt.	324.0	46.2	19.3	Portland, Oreg.	New Orleans, La.	General.	7,575	6,624	4,883
Pont Gorda	6	21	30	7	11	35	7	23	15	American.	Dimon S. S. Corp.	410.5	54.0	25.5	Seattle, Wash.	Norfolk, Va.	Lumber, general.	376	8,407	5,212
Pacific Fir	7	10	20	7	13	18	7	23	50	American.	U. S. Navy.	448.0	58.2	25.0	San Francisco, Cal.	Hampton Rds., Va.	General.	7,450	6,050	4,615
Chaumont	7	11	10	7	15	45	7	23	50	British.	Continental Grain Co.	375.0	52.6	25.4	Vancouver, B. C.	Lisbon, Portugal.	Wheat.	8,000	6,591	4,936
Jedmoor	7	20	30	8	6	16	8	14	30	Danish.	Inter. Freight Co.	385.6	54.9	25.0	Tocopilla, Chile.	Pensacola, Fla.	Nitrates.	12,600	9,587	6,379
Nordhavet	8	1	00	8	7	05	8	15	15	British.	British Molasses Co.	475.0	63.5	27.0	Hilo, T. H.	Lands End, Eng.	Molasses.	6,920	5,838	4,103
Athel	8	9	30	8	10	10	8	20	10	Belgian.	Cie Maritime Belge	400.0	52.3	25.0	Vancouver, B. C.	London, England.	General.	334	1,270	735
Duchess	8	13	45	8	15	28	9	00	15	German.	Hamburg-American Line	227.2	34.4	14.3	Champerico, Guat.	Cristobal, C. Z.	General.	803	1,572	1,011
Salvador	8	14	50	8	15	36	9	00	05	American.	Luckenbach Line.	448.9	60.2	29.1	Portland, Oreg.	Boston, Mass.	General.	1,783	6,033	4,353
Cerro	8	14	50	8	15	36	9	05	05	American.	Panama Mail S. S. Co.	380.0	48.7	21.0	San Francisco, Cal.	New York, N. Y.	General.	19,000	16,364	11,790
Venezuela	8	23	00	9	7	06	9	16	25	Norwegian.	Rasmussen & Konow.	537.9	74.3	34.0	Stewart Is., N. Z.	New York, N. Y.	Whale oil.	5,432	13,016	9,415
Sir James	9	7	35	9	8	57	9	18	40	British.	N. Z. Shipping Co.	472.0	67.2	25.0	Dunedin, N. Z.	Glasgow, Scotland.	Frozen, general.	8,062	9,139	6,666
Otao	9	7	50	9	9	22	9	17	35	German.	Hamburg-American Line	462.2	61.2	26.8	Vancouver, B. C.	Hamburg, Germany.	General.	5,913	5,550	3,920
Portland	9	9	55	9	10	32	9	18	55	American.	Richfield Oil Co.	391.8	53.1	25.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	550	1,182	742
Kekeskee	9	10	15	9	11	10	9	20	10	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	12.10	Guayaquil, Ecuador	Cristobal, C. Z.	General.	6,489	12,482	8,863
Barat	9	7	50	9	14	32	9	21	45	British.	Federal Steam Nav. Co.	524.5	65.7	24.0	Auckland, N. Z.	London, England.	Frozen, general.	19,000	16,364	11,790
Cambridge	9	7	50	9	14	32	9	21	45	British.	Federal Steam Nav. Co.	524.5	65.7	24.0	Auckland, N. Z.	London, England.	Frozen, general.	19,000	16,364	11,790

¹⁶ Gasoline and kerosene.

¹⁷ For orders.

¹⁸ Motor ship.

Tanker.

¹⁶ Gasoline and kerosene.¹⁵ For orders.¹⁴ Motor ship.¹³ Tanker.

Tokai Maru ¹⁴	9 16 25	9 17 08	10 00 15	10 09 50	Japanese	Oakea Shosen Kaisha	446.0	60.5	24.6	Shanghai, China	Baltimore, Md	General	5,558	8,982	6,274
Chlorine of Empress of Australia	9 21 07	10 00 15	10 18 10	10 18 10	10 18 10	Ore S. Corp.	549.6	72.2	34.0	Cruz Grande, Chile	Baltimore, Md	Iron ore	21,000	14,538	4,480
Hansa ¹⁴	9 21 30	10 00 15	10 18 10	10 18 10	10 18 10	Can.-Pacific S. S. Co.	589.9	73.2	26.6	San Francisco, Cal.	New York, N. Y.	World cruise	22,680	14,477	
Port Pirie	9 21 30	10 00 15	10 18 10	10 18 10	10 18 10	Anglo-Saxon Pet. Co.	412.9	52.6	26.6	Los Angeles, Calif.	Lands End, Eng. ¹³	Gasoline	7,089	6,185	4,169
Tokoku Maru	9 22 40	10 00 15	10 18 10	10 18 10	10 18 10	Con'th & Dom. Line	470.1	58.4	24.6	Lytleton, N. Z.	London, Eng.	Frozen, general	5,363	9,381	6,915
Cauca ¹⁴	9 21 30	10 00 15	10 18 10	10 18 10	10 18 10	Kokusai Kisen Kaisha	385.0	51.0	26.0	Hungaren, P. I.	New Orleans, La.	Sugar	7,000	5,919	4,400
Steel Engineer	9 21 30	10 00 15	10 18 10	10 18 10	10 18 10	National Navigation Co.	407.2	22.9	11.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee, hides	294	262	161
Kenows	9 13 45	10 00 15	10 18 10	10 18 10	10 18 10	Isfshman S. S. Lines	424.2	56.2	26.0	Kaunapali, T. H.	New Orleans, La.	Sugar	8,482	7,611	5,450
Oroya	9 13 45	10 00 15	10 18 10	10 18 10	10 18 10	U. S. Army	390.0	54.2	18.0	Honolulu, T. H.	New York, N. Y.	Army stores	152		
Iowan	9 13 45	10 00 15	10 18 10	10 18 10	10 18 10	Pacific Steam Nav. Co.	525.3	62.8	27.8	Talcahuano, Chile	Liverpool, England	General	7,917	13,137	9,067
Henry S. Grove	9 18 40	10 00 15	10 18 10	10 18 10	10 18 10	Amer.-Hawaii Line	407.7	53.9	23.10	Seattle, Wash.	Boston, Mass	General	6,698	7,079	5,028
New Jersey ¹⁴	10 17 40	10 00 15	10 18 10	10 18 10	10 18 10	Nautilus S. S. Corp.	404.6	53.9	25.6	Everett, Wash.	Port Newark, N. J.	Lumber	6,043	6,755	4,688
Port Alma ¹⁴	10 17 40	10 00 15	10 18 10	10 18 10	10 18 10	The Texas Co. Line	416.8	61.1	26.6	Los Angeles, Calif	New York, N. Y.	Gasoline	8,475	6,924	4,982
Illinois ¹⁴	10 17 40	10 00 15	10 18 10	10 18 10	10 18 10	Con'th & Dom. Line	475.0	63.2	25.4	Bluff, N. Z.	London, England	Frozen, general	5,860	10,684	7,796
Sheaf Lance	10 21 55	11 11 11	12 11 11	12 11 11	12 11 11	The Texas Co. Ltd.	416.8	56.1	27.0	Los Angeles, Calif	New York, N. Y.	Gasoline	8,209	6,945	5,011
Atlantic	11 6 45	11 11 11	12 11 11	12 11 11	12 11 11	Argonaut S. S. Co.	330.5	46.7	12.6	Callao, Peru	Freeport, Texas	Ballast	7,545	6,567	4,917
Seminole ¹⁴	11 6 30	11 11 11	12 11 11	12 11 11	12 11 11	Anglo-Amer. Oil Co.	410.5	54.3	25.0	Honolulu, T. H.	Philadelphia, Pa.	Sugar	6,224	7,012	5,022
Grantley Hall	11 10 50	11 12 41	12 11 11	12 11 11	12 11 11	Freighting Corp.	424.5	57.0	25.0	Los Angeles, Calif	Ellensburg, Eng.	Gasoline	8,150	6,554	4,633
Eastern Sun ¹⁴	11 13 25	11 14 45	12 11 11	12 11 11	12 11 11	Sun Oil Co.	480.6	66.0	28.6	Tocopilla, Chile	Wilmington, N. C.	Nitrates	13,301	9,607	6,548
Cortino	11 15 10	11 16 04	12 11 11	12 11 11	12 11 11	Panama Mail S. S. Co.	291.1	40.0	13.3	Acajutla, Salvador	Cristobal, C. Z.	General	519	2,352	1,549
Canadian	11 15 15	11 16 25	12 11 11	12 11 11	12 11 11	Can. Nat. Steamships	413.0	52.0	23.0	Vancouver, B. C.	Montreal, Canada	Lumber, general	6,084	5,885	4,073
Winner	11 15 45	11 17 00	12 11 11	12 11 11	12 11 11	Anglo-Chilean Nitro Co.	380.0	51.0	24.0	Tocopilla, Chile	Charleston, S. C.	Nitrates	7,052	5,361	3,939
Grallstone	11 15 45	11 17 00	12 11 11	12 11 11	12 11 11	Royal Mail S. P. Co.	485.6	62.2	30.0	Vancouver, B. C.	Rotterdam, Holl'd	General	9,413	10,772	7,581
Lochmonar ¹⁴	11 15 45	11 17 00	12 11 11	12 11 11	12 11 11										

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 5	Costarica	Royal Netherlands S. S. Co.	Amsterdam via waypoints.	April 5	Galicia	Hamburg-American Line	Cartagena, Colombia.
April 5	Pastores	United Fruit Co.	Port Limon, Costa Rica.	April 5	No. 9688 ¹⁷	Pan American Airways	San Salvador via waypoints.
April 6	Tillie Lykes	Lykes Brothers S. S. Co.	New York via Habana.	April 5	Reliance	Hamburg-American Line	New York via Habana.
April 6	Wauna	Standard Fruit & S. S. Co.	Galveston, Texas.	April 5	Pastores	United Fruit Co.	New York via Habana.
April 6	Darien C-35 ¹⁷	Seadta Airplane Co.	Puerto Cabezas, Nic.	April 6	Annetta I. ¹⁸	P. W. Hamilton	Colon, Rep. of Panama.
April 7	No. 300-N ¹⁷	Pan American-Grace Airways	Hammond via waypoints.	April 6	Costarica	Pan American Airways	Miami via waypoints.
April 7	Grunewald	Hamburg via waypoints.	Pimental via waypoints.	April 6	Carrillo	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
April 8	Cristobal	Panama R. S. S. Line	New York via Haiti.	April 6	Tillie Lykes	United Fruit Co.	New York via waypoints.
April 8	Tela	United Fruit Co.	New Orleans, La.	April 8	Wauna	Standard Fruit & S. S. Co.	Galveston via waypoints.
April 8	Anacuena ¹⁸	Colon, Rep. of Panama.	Colon, Rep. of Panama.	April 8	No. 9684 ¹⁷	Lykes Brothers S. S. Co.	Puerto Cabezas, Nic.
April 8	Skaola	United Fruit Co.	Colon, Rep. of Panama.	April 8	No. 670-M ¹⁷	Pan American Airways	San Salvador via waypoints.
April 8	Inapaquina ¹⁸	A. Tagaropulos	Colon, Rep. of Panama.	April 8	Anacuena ¹⁸	United Fruit Co.	Miami via waypoints.
April 8	No. 669-N ¹⁷	Pan American Airways	Miami via waypoints.	April 8	Inapaquina ¹⁸	United Fruit Co.	Colon, Rep. of Panama.
April 8	No. 9688 ¹⁷	Pan American Airways	San Salvador and waypoints.	April 8	Grunewald	Hamburg-American Line	Tamico via waypoints.
April 9	Martique ¹⁸	Colombian S. S. Line	New York via waypoints.	April 9	Tela	United Fruit Co.	Port Limon via Bocas.

* Other than ships passing through the Canal.

¹⁷ Air mail carrier.¹⁸ Motor boat.

MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.				
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 10	Ariguaní.....	Elders & Pyffes, Ltd.	Avonmouth via wayports.	April 9	No. 309-N ¹⁹	Pan American Airways	La Guayra via wayports.
April 10	Ulua.....	United Fruit Co.	New York via Habana.	April 9	Sixola.....	United Fruit Co.	Cartagena, Colombia.
April 10	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans via Habana.	April 10	Martinique.....	Colombian S. S. Line.	New York via Kingston.
April 10	Costarica.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	April 10	Ulua.....	United Fruit Co.	Port Limon, Costa Rica.
April 10	Convallaria.....	Aluminum Line.	Tampa, Florida.	April 10	Darien C-35 ¹⁹	Seadta Airplane Co.	Barranquilla and waypts.
April 11	Tela.....	United Fruit Co.	Port Limon, Costa Rica.	April 11	Anachucuna ²⁰	United Fruit Co.	Colon, Rep. of Panama.
April 11	No. 309-N ¹⁹	Pan American Airways	La Guayra via wayports.	April 11	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans and waypts.
April 11	No. 668-M ¹⁹	Pan American Airways	Miami via wayports.	April 11	Tela.....	United Fruit Co.	New Orleans and waypts.
April 11	No. 144-M ¹⁹	Pan American-Grace Airways	Pimental via wayports.	April 11	Convallaria.....	Aluminum Line	New Orleans and waypts.
April 11	No. 9664 ¹⁹	Pan American Airways	San Salvador via waypts.	April 11	Ariguaní.....	Elders & Pyffes, Ltd.	Avonmouth via wayports.
April 11	Annetta I. ²⁰	P. W. Hamilton.	Colon, Rep. of Panama.	April 11	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
April 11	Inapacuna ²⁰	United Fruit Co.	Colon, Rep. of Panama.	April 11			
April 11	A. Tagaropulos	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.				
April 10	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.				

¹⁹ Air mail carrier. ²⁰ Motor boat. ²¹ Motor schooner.

PORT OF BALBOA.

April 10	All America	All America Cables, Inc.	Callao, Peru.	April 10	Sambu ²²	Hans Elliot	Panama, R. P.
April 10	Sambu ²²	Hans Elliot	Panama, R. P.				

²² Motor ship. * Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in March, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for March, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States	73	388,315	296,868	477,498	296,853	\$334,014.64	180,168
Europe to Canada:							
Belgian	1	6,292	5,752	7,816	5,758	4,530.24	
British	10	55,629	40,025	64,978	40,153	42,730.09	6,613
Danish	2	13,417	9,946	16,760	10,417	11,135.97	3,047
French	2	11,982	7,028	13,830	7,463	8,785.00	3,794
German	2	13,648	8,619	15,048	9,070	10,773.75	5,181
Italian	2	12,154	8,975	14,933	9,413	11,218.75	2,283
Norwegian	2	12,257	7,038	11,671	7,132	8,797.50	8,138
Swedish	1	5,337	2,861	5,210	3,747	3,576.25	3,152
Total	22	130,716	90,244	150,246	93,153	101,547.55	32,208
United States to South America:							
British	6	22,741	17,396	28,178	17,358	19,512.81	4,642
Chilean	1	4,705	3,466	7,310	3,976	4,332.50	1,325
Danish	1	4,569	2,709	4,472	2,732	3,386.25	2,250
Japanese	1	4,400	4,358	5,864	4,259	3,268.50	
Swedish	2	8,917	7,486	30,676	8,762	6,420.24	
United States	9	36,817	27,472	51,027	27,418	29,970.50	13,479
Total	20	82,149	62,887	127,527	64,505	66,890.80	21,696
United States to Far East:							
British	5	28,761	16,591	28,926	16,683	20,738.75	19,847
Japanese	7	37,279	32,317	48,638	31,564	40,048.70	36,611
Norwegian	2	11,769	6,511	11,045	6,628	8,138.75	6,410
United States	3	16,183	10,769	17,571	10,722	13,461.25	20,493
Total	17	93,992	66,188	106,180	65,597	82,387.45	83,361
Europe to South America:							
British	3	22,012	18,267	30,306	18,593	22,833.75	8,441
Chilean	1					14,000.00	
Dutch	2	9,825	5,355	9,164	5,565	6,693.75	3,962
French	1	4,936	3,385	5,751	3,555	4,231.25	1,164
German	4	20,070	14,996	24,743	14,846	17,248.28	6,851
Italian	1	9,373	5,223	11,669	6,779	6,528.75	1,641
Norwegian	1	5,001	2,753	4,744	2,829	3,441.25	3,082
Swedish	1	3,967	3,072	5,065	4,065	3,840.00	5,580
Total	14	75,184	53,051	91,442	56,232	78,817.03	30,721
Cristobal to South America:							
British	1	1,587	1,282	2,533	1,411	1,142.64	
Colombian	4	570	550	880	550	668.90	432
Dutch	2	1,484	588	1,560	646	735.00	246
German	6	5,273	3,396	6,551	3,530	4,245.00	1,208
Total	13	8,914	5,816	11,524	6,137	6,791.54	1,886
Europe to Australasia:							
British	11	85,054	59,065	97,827	59,725	73,831.25	40,457
French	1	3,797	3,089	5,106	3,077	3,861.25	3,434
Total	12	88,851	62,154	102,933	62,802	77,692.50	43,891
Europe to United States:							
British	5	27,518	24,376	35,918	24,410	21,574.26	1,996
French	1	5,001	4,377	7,011	3,989	3,600.72	
German	1	7,698	5,626	9,026	5,637	7,032.50	1,372
Japanese	1	4,977	4,177	5,665	4,341	3,583.44	
Norwegian	3	15,806	12,157	20,168	11,873	11,380.32	
Total	11	61,000	50,713	77,788	50,250	47,171.24	3,368

* Naval vessel of 28,000 tons displacement.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Philippine Islands:							
British.....	2	11,229	6,543	11,730	6,734	\$8,178.75	4,815
Danish.....	1	4,483	2,495	4,194	2,582	3,118.75	4,625
United States.....	3	18,854	15,763	24,196	15,054	19,703.75	16,863
Total.....	6	34,566	24,801	40,120	24,320	31,001.25	26,303
Cristobal to United States:							
British.....	1	4,459	3,736	6,138	3,838	3,210.48	.....
United States.....	4	9,301	8,284	13,504	8,281	8,546.51	299
Total.....	5	13,760	12,020	19,642	12,119	11,756.99	299
Cristobal to Central America:							
British.....	2	1,441	1,286	2,297	1,304	1,607.50	1,344
Norwegian.....	1	722	579	990	569	519.84	.....
United States.....	2	4,155	2,517	4,408	2,510	3,146.25	963
Total.....	5	6,318	4,382	7,695	4,383	5,273.59	2,307
United States to Canada:							
Danish.....	1	4,691	2,705	4,532	2,772	3,377.52	.....
United States.....	3	15,521	11,774	18,579	11,665	14,717.50	19,186
Total.....	4	20,212	14,479	23,111	14,437	18,095.02	19,186
South America to Canada:							
Norwegian.....	1	5,308	2,894	4,873	2,984	3,617.50	3,840
United States.....	2	10,060	7,095	11,130	7,074	8,868.75	6,157
Total.....	3	15,368	9,989	16,003	10,058	12,486.25	9,997
Foreign vessels in ballast—							
United States inter-coastal:							
British.....	1	5,861	3,129	5,299	3,091	3,911.25	.....
Norwegian.....	1	5,053	2,788	4,663	2,793	3,485.00	.....
Total.....	2	10,919	5,917	9,962	5,884	7,396.25	.....
United States to Australasia:							
British.....	2	10,900	7,441	11,749	7,482	9,301.25	7,418
Canadian intercoastal:							
British.....	2	8,372	6,644	10,904	6,736	8,305.00	3,665
Canada to Australasia:							
British.....	2	13,130	10,107	16,371	10,225	12,633.75	9,543
West Indies to Canada:							
Norwegian.....	2	7,304	5,991	9,831	5,973	7,488.75	808
South American intercoastal:							
Danish.....	1	6,127	5,268	8,939	5,007	4,411.44	.....
German.....	1	1,837	1,295	2,159	1,263	1,618.75	1,950
Total.....	2	7,964	6,563	11,098	6,270	6,030.19	1,950
Round the world:							
United States.....	2	18,429	12,589	21,020	12,589	15,736.25	7,292
Canada to United States:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,929
South America to Far East:							
Japanese.....	1	7,626	5,441	9,627	5,848	6,801.25	3,694
Europe to Central America:							
German.....	1	1,967	1,689	2,867	1,690	2,111.25	2,138
West Indies to Balboa:							
German.....	1	1,934	1,609	2,770	1,517	2,011.25	3,789
Grand total, March, 1931.....	223	1,110,097	818,822	1,360,246	826,309	953,289.79	499,617
Grand total, March, 1930.....	248	1,201,280	890,694	1,472,073	894,532	1,027,047.10	741,986
Grand total, March, 1929.....	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	63	367,941	275,806	448,455	274,780	\$344,747.50	486,904
Canada to Europe:							
Belgian.....	1	7,044	4,567	7,217*	4,398	5,708.75	10,450
British.....	18	102,314	74,211	117,710	72,812	92,763.75	126,105
Dutch.....	2	15,407	10,748	17,465	10,832	13,435.00	18,124

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Canada to Europe—Continued:							
French.....	1	7,513	4,581	8,152	4,882	\$5,726.25	6,750
German.....	4	26,584	17,628	29,566	18,031	22,035.00	33,596
Italian.....	2	11,973	8,719	14,159	8,958	10,898.75	17,565
Norwegian.....	4	17,234	11,709	19,278	11,825	14,636.25	25,277
Swedish.....	2	10,452	6,320	10,514	7,890	7,900.00	12,678
Total.....	34	198,521	138,483	224,061	139,628	173,103.75	250,545
South America to United States:							
British.....	4	12,195	10,080	16,117	10,021	12,600.00	22,073
Chilean.....	3	13,194	9,219	16,237	9,458	11,523.75	17,641
Norwegian.....	2	9,176	6,020	9,917	6,023	7,525.00	15,350
Swedish.....	2	8,917	7,486	30,876	8,762	9,357.50	42,810
United States.....	11	45,667	32,135	58,958	32,045	40,043.17	63,909
Total.....	22	89,149	64,940	132,105	66,309	81,049.42	161,783
South America to Europe:							
British.....	4	37,973	28,179	48,631	29,885	35,223.75	26,319
Danzig.....	1	6,127	5,268	8,939	5,007	6,585.00	11,300
Dutch.....	2	10,895	7,185	12,446	7,244	8,981.25	15,407
French.....	2	9,207	7,549	12,303	7,634	9,436.25	16,596
German.....	6	30,702	23,031	37,334	22,444	28,788.75	47,188
Norwegian.....	1	3,925	3,118	5,113	3,125	3,897.50	6,136
Total.....	16	98,829	74,330	124,766	75,339	92,912.50	122,946
South America to Cristobal:							
Colombian.....	5	731	712	1,113	716	870.50	914
Dutch.....	1	742	294	780	323	367.50	240
German.....	5	4,532	2,777	5,480	2,890	3,471.25	2,103
United States.....	1	55	67	98	67	50.25	.....
Total.....	12	6,060	3,850	7,471	3,996	4,759.50	3,257
Australasia to Europe:							
British.....	13	106,912	73,131	120,123	74,154	91,413.75	79,166
French.....	1	5,629	4,343	7,007	4,402	5,428.75	4,857
Total.....	14	112,541	77,474	127,130	78,556	96,842.50	84,023
Philippine Islands to United States:							
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,575
Japanese.....	6	29,614	25,898	37,393	25,528	32,372.50	46,999
Norwegian.....	1	6,829	3,973	6,687	4,085	4,966.25	5,893
United States.....	3	18,590	14,598	22,809	14,496	18,247.50	29,187
Total.....	11	60,533	47,550	71,927	47,264	59,437.50	89,654
United States to Europe:							
British.....	2	9,230	7,691	12,694	7,546	9,613.75	15,628
French.....	2	9,565	6,999	12,995	6,799	8,748.75	15,572
Italian.....	1	4,421	3,764	6,107	3,883	4,705.00	3,078
Norwegian.....	2	10,616	9,044	14,712	8,858	11,305.00	19,793
United States.....	2	11,507	9,871	14,191	9,921	12,171.70	18,554
Total.....	9	45,339	37,369	60,699	37,007	46,554.20	72,625
United States to Cristobal:							
United States.....	6	14,048	11,602	19,166	11,509	14,449.45	7,360
Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	590
Norwegian.....	1	722	579	990	569	723.75	702
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	1,612
Total.....	4	3,712	3,032	5,262	3,034	3,790.00	2,904
Hawaii to United States:							
United States.....	3	11,399	8,154	12,466	8,180	10,150.20	18,536
South America to Canada:							
British.....	2	12,989	11,069	20,293	10,538	13,836.25	27,510
Danzig.....	1	7,888	5,410	9,006	5,111	6,762.50	13,300
Total.....	3	20,877	16,479	29,299	15,649	20,598.75	40,810
Australasia to United States:							
Norwegian.....	1	3,540	2,390	3,971	2,452	2,987.50	6,594
United States.....	1	5,247	3,825	6,197	3,822	4,781.25	7,583
Total.....	2	8,787	6,215	10,168	6,274	7,768.75	14,177

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Far East to United States:							
Japanese.....	2	11,020	3,645	14,017	8,497	\$10,806.25	7,655
Canada to United States:							
Norwegian.....	2	8,972	4,888	8,272	4,967	6,110.00	12,599
United States to West Indies:							
United States.....	2	6,294	5,367	8,752	5,328	4,531.68	.....
Canadian intercoastal:							
British.....	2	9,097	6,727	11,098	6,863	8,408.75	15,534
Australasia to Canada:							
British.....	2	8,632	6,556	10,828	6,596	8,195.00	3,024
Central America to Europe:							
German.....	1	1,967	1,689	2,867	1,690	2,111.25	1,150
Norwegian.....	1	722	579	990	569	723.75	668
Total.....	2	2,689	2,268	3,857	2,259	2,835.00	1,818
Balboa to United States:							
United States.....	1	332	320	662	320	240.00	.....
Far East to West Indies:							
Norwegian.....	1	5,131	2,829	4,819	2,829	3,536.25	8,220
Balboa to West Indies:							
German.....	1	1,934	1,566	2,770	1,517	1,392.48	.....
United States to South America:							
United States.....	1	5,011	3,623	5,702	3,580	4,528.75	6,652
Canada to South America:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	4,864
Grand total, March, 1931.....	216	1,101,837	811,590	1,349,302	813,798	1,011,144.43	1,415,890
Grand total, March, 1930.....	267	1,304,579	986,078	1,631,485	994,054	1,232,955.26	1,816,252
Grand total, March, 1929.....	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 2, 1931.

No. 864.

Panama Canal, north end of Bas Obispo Reach, aids to navigation. Beacon No. 2, which was temporarily discontinued on June 6, 1930, on account of dredging operations, was temporarily replaced by a floating light, flashing red, at station No. 1496 on April 1, 1931, due to the dredge being removed.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 9, 1931.

No. 867.

Central America, Nicaragua, Corinto Harbor, buoy replaced. The following message was received from the commanding officer of the U. S. S. *Rochester* through the Balboa Radio Station:

Buoy No. 5 in Corinto Harbor was replaced on April 7, 1931, 300 yards, 72° 15' from Cardon Head Light.

Approximate position of Cardon Head Light: Lat. 12° 27' 54" N., long. 87° 12' 30" W.

(NOTE.—See Notice to Mariners No. 851, Balboa Heights, dated March 5, 1931, for information concerning positions of other buoys in Corinto Harbor.)

H. BURGESS,
Governor.

Traffic by Nationality for March, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of March, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for March, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	6,292	5,752	7,816	5,758	\$4,530.24	
British.....	54	300,901	217,127	355,492	218,992	251,060.28	112,710
Chilean.....	2	4,705	3,466	7,310	3,976	18,332.50	1,325
Colombian.....	4	570	550	880	550	668.90	432
Danish.....	5	27,160	17,855	29,958	18,453	21,018.49	9,922
Danzig.....	1	6,127	5,268	8,939	5,007	4,411.44	
Dutch.....	4	11,309	5,943	10,724	6,211	7,428.75	4,208
French.....	5	25,716	17,879	31,698	18,084	20,478.22	8,392
German.....	16	52,427	37,230	63,164	37,553	45,040.78	22,489
Italian.....	3	21,527	14,198	26,602	16,192	17,747.50	3,924
Japanese.....	10	54,282	46,293	69,794	46,012	53,701.89	40,305
Norwegian.....	13	63,225	40,711	67,985	40,781	46,868.91	22,278
Swedish.....	4	18,221	13,419	40,951	16,574	13,836.49	8,732
United States.....	101	517,635	393,131	638,933	392,166	448,165.40	264,900
Total, March, 1931.....	223	1,110,097	818,822	1,360,246	826,309	953,289.79	499,617
Total, March, 1930.....	248	1,201,280	890,694	1,472,073	894,532	1,027,047.10	741,986
Total, March, 1929.....	267	1,269,820	962,148	1,586,095	968,099	1,095,635.11	841,941

* Includes naval vessel of 28,000 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	7,044	4,567	7,217	4,398	\$5,708.75	10,450
British.....	49	300,783	218,930	359,792	219,719	273,662.50	315,949
Chilean.....	3	13,194	9,219	16,237	9,458	11,523.75	17,641
Colombian.....	5	731	712	1,113	716	870.50	914
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,575
Danzig.....	2	14,015	10,678	17,945	10,118	13,347.50	24,600
Dutch.....	5	27,044	18,227	30,691	18,399	22,782.75	33,771
French.....	6	31,914	23,472	40,457	23,717	29,340.00	43,775
German.....	17	65,719	46,691	78,017	46,572	57,798.73	84,037
Italian.....	3	16,394	12,483	20,266	12,841	15,603.75	20,643
Japanese.....	8	40,634	34,543	51,410	34,025	43,178.75	54,654
Norwegian.....	16	66,867	45,129	74,749	45,302	56,411.25	101,232
Swedish.....	4	19,369	13,806	41,390	16,652	17,257.50	55,488
United States.....	96	492,629	370,052	604,980	368,726	459,806.45	645,161
Totals, March, 1931.....	216	1,101,837	811,590	1,349,302	813,798	1,011,144.43	1,415,890
Total, March, 1930.....	267	1,304,579	986,078	1,631,485	994,054	1,232,955.26	1,816,252
Total, March, 1929.....	269	1,298,141	1,002,898	1,644,148	1,008,805	1,248,230.44	1,901,827

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	13,336	10,319	15,033	10,156	\$10,238.99	10,450
British.....	103	601,684	436,057	715,284	438,711	524,722.78	428,659
Chilean.....	5	17,899	12,685	23,547	13,434	29,856.25	18,966
Colombian.....	9	1,301	1,262	1,993	1,266	1,539.40	1,346
Danish.....	6	32,660	20,936	34,996	21,608	24,869.74	17,497
Danzig.....	3	20,142	15,946	26,884	15,125	17,758.94	24,600
Dutch.....	9	38,353	24,170	41,415	24,610	30,212.50	37,979
French.....	11	57,630	41,351	72,155	41,801	49,818.22	52,167
German.....	33	118,146	83,921	141,181	84,125	102,839.51	106,526
Italian.....	6	37,921	26,681	46,868	29,033	33,351.25	24,567
Japanese.....	18	94,916	80,836	121,204	80,037	96,880.64	94,959
Norwegian.....	29	139,092	85,840	142,734	86,083	103,280.16	123,510
Swedish.....	8	37,890	27,225	82,341	33,226	31,093.99	64,220
United States.....	197	1,010,264	763,183	1,243,913	760,892	907,971.85	910,061
Total, March, 1931.....	439	2,211,934	1,630,412	2,709,548	1,640,107	1,964,434.22	1,915,507
Total, March, 1930.....	515	2,505,859	1,876,772	3,103,558	1,888,586	2,260,002.36	2,558,238
Total, March, 1929.....	536	2,567,961	1,965,046	3,230,243	1,976,904	2,343,865.55	2,743,768

* Includes naval vessel of 28,000 displacement tons.

United States Intercoastal Traffic by Commodities for March, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for March, 1931, and the totals for March, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations shall items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	658	12	670
Alfalfa.....	584	584	584
Alfalfa meal.....	1,038	1,038	1,038
Ammonia.....	312	312	312
Asbestos.....	77	77	77
Asphalt.....	266	347	613
Automobiles.....	8,568	323	8,891
Automobile accessories.....	1,112	29	1,141
Bamboo.....	50	50	50
Barley.....	12	12	12
Beans.....	18	6,719	6,737
Borax.....	667	667	667
Bricks.....	172	172	172
Burlap.....	141	141	141
Calcium carbide.....	138	138	138
Camphor.....	25	25	25
Canned:			
Fish.....	252	9,324	9,576
Fruit.....	379	31,449	31,828
Meat.....	80	74	154
Milk.....	98	113	211
Soup.....	3,751	3,751	3,751
Vegetables.....	833	8,204	9,037
Miscellaneous and unclassified.....	1,683	9,070	10,753
Carbon black.....	40	40	40
Celite filtercd.....	232	232	232
Cement.....	205	43	248
Charcoal.....	50	100	150
Chemicals.....	3,988	1,185	5,173
China and fire clay.....	684	242	926
Coal.....	1,027	1,027	1,027
Cocoa.....	31	31	31
Coconuts.....	12	1,051	1,063
Coffee.....	573	89	662
Coke.....	1,272	1,272	1,272
Cold storage:			
Beef.....	2	2	2
Cheese.....	3	29	32
Eggs.....	465	465	465
Fish.....	240	200	440
Lard.....	153	153	153
Other.....	322	201	523
Confectionery.....	732	732	732
Cork.....	26	26	26
Corn.....	90	90	90
Cotton.....	326	3,325	3,651
Cyanide.....	168	168	168
Drugs and medicines.....	1,222	69	1,291
Dyes.....	540	540	540
Earthenware.....	99	20	119
Eggs, dried.....	7	7	7
Explosives.....	120	41	170
Fertilizer.....	45	116	161
Flour.....	263	11,342	11,605
Fruit:			
Dried.....	72	13,928	14,000
Fresh.....	379	2,048	2,427
Fuller's earth.....	33	33	33
Furniture.....	455	95	550
General.....	39,157	9,393	48,550
Glass and glassware.....	1,651	152	1,803
Glue.....	39	125	164
Granite.....	118	118	118
Guanos.....	30	30	30
Hair.....	16	41	57
Hardwoods.....	610	47	657

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Hay		775	775
Hemp	107	50	157
Honey		305	305
Hops		242	242
Infusorial earth		281	281
Ink	29		29
Jute	23	149	172
Lard substitute	928		928
Linoleum	684	64	748
Liquors	108		108
Lumber	1,159	145,235	146,394
Malt	127		127
Manufactured goods:			
Iron and steel	56,559	1,599	58,158
Machinery	3,921	433	4,354
Railroad material	170		170
Tinplate	8,640	36	8,676
Textiles	3,512	207	3,719
Miscellaneous	8,425	2,039	10,464
Marble	184		184
Matches	319	10	329
Metals:			
Copper		6,687	6,687
Iron	661	800	1,461
Lead	52	469	521
Scrap	419	361	780
Tin		106	106
Zinc	16	750	766
Other	28		28
Milk, powdered	15	779	794
Molasses	74	4	78
Musical instruments	9		9
Nitrates	1,846		1,846
Nuts	6	431	437
Oats	67		67
Oils:			
Coconut	45		45
Cottonseed	161		161
Gas oil, fuel oil		9,833	9,833
Gasoline, benzine, naphtha	74	161,446	161,520
Linseed	23		23
Lubricating and greases	8,070	784	8,854
Olive	33	22	55
Vegetable	306	375	681
Wood		29	29
Other	198	21	219
Ores:			
Copper		1,000	1,000
Magnesite		139	139
Tin		56	56
Zinc		511	511
Other		36	36
Paint	491	1,292	1,783
Paper	4,290	8,145	12,435
Paper pulp		4,695	4,695
Peanuts	720	480	1,200
Phosphates	747	234	981
Plaster		94	94
Porcelain	146	121	267
Rags		120	120
Rice	184	355	539
Rope	203	108	311
Rosin	959		959
Rubber:			
Manufactured	888	213	1,101
Raw	60		60
Scrap		136	136
Salt	89	99	188
Sand	45		45
Seeds:			
Grass		66	66
Hemp		22	22
Other		404	404
Shells	1,048		1,048
Silk		3,429	3,429
Skins and hides	28	1,621	1,649
Slate	420		420
Soap	1,852	127	1,979
Soda	82		82
Soda ash	1,324		1,324
Soda, bicarbonate	186	25	211
Soda, caustic	495		495
Starch	54		54
Sugar	81	6,054	6,135
Sulphur	14,954		14,954

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Syrup.....	470	10	480
Talc.....	48	60	108
Tar.....	41		41
Tea.....	30	62	92
Tobacco.....	995	41	1,036
Toys.....	25	20	45
Turpentine.....	55		55
Vegetables.....		496	496
Waste.....	9	472	481
Wax.....	192		192
Wheat.....		89	89
Wine.....		127	127
Wool.....		1,691	1,691
Zinc oxide.....	31		31
Total, March, 1931.....	201,404	479,774	681,178
Total, March, 1930.....	274,396	601,300	875,696
Total, March, 1929.....	282,344	620,659	903,003

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending April 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon.....	Panama R. R. S. S. Line.....		March 29.....		722
Durazzo.....	Hamburg-American Line.....		March 29.....		106
Tolosa.....	United Fruit Co.....	March 29.....	March 29.....		245
Cartago.....	United Fruit Co.....	March 29.....	March 30.....	142	50
Cauca.....	National Navigation Co.....	March 29.....	April 3.....	157	269
Buenaventura.....	Panama R. R. S. S. Line.....	March 30.....	March 30.....	372	63
Fella.....	Navigazione Libera Triestina.....	March 30.....	March 30.....	(¹)	183
Santa Maria.....	Grace Line.....	March 30.....	March 31.....	150	181
San Angelo.....	Pacific-Atlantic S. S. Co.....	March 30.....	March 31.....	63	(²)
Kreta.....	Hamburg-American Line.....	March 30.....	March 31.....	538	444
Schwaben.....	North German Lloyd.....	March 30.....	March 31.....	150	(²)
Abana.....	North German Lloyd.....	March 31.....	March 31.....	7	731
Atago Maru.....	Nippon Yusen Kaisha.....	March 31.....	March 31.....	174	(²)
Guadeloupe.....	French Line.....	March 31.....	April 1.....	139	936
San Mateo.....	United Fruit Co.....	March 31.....	April 2.....	1,178	(²)
Heilo.....	Panama Mail S. S. Co.....	March 31.....	April 2.....	735	(²)
Daytonian.....	Leyland S. S. Line.....	March 31.....	April 1.....	624	(²)
Acajutla.....	Pacific Steam Navigation Co.....		April 1.....		491
Pastores.....	United Fruit Co.....	April 1.....	April 1.....	461	14
Nosa Prince.....	N. O. & S. A. S. S. Co.....	April 1.....	April 1.....	96	51
Iriona.....	United Fruit Co.....	April 1.....	April 2.....	919	(²)
Courageous.....	Roosevelt S. S. Co.....	April 1.....	April 2.....	231	(²)
Metapan.....	United Fruit Co.....	April 1.....	April 2.....	639	555
Santa Clara.....	Grace Line.....	April 2.....	April 2.....	195	444
California.....	Navigazione Libera Triestina.....	April 2.....	April 2.....	110	(²)
Canada.....	Johnson Line.....	April 2.....	April 2.....	(¹)	383
Oregon.....	French Line.....	April 2.....	April 3.....	134	450
Schwarzwald.....	Hamburg-American Line.....	April 2.....	April 3.....	85	89
Arcs.....	Royal Netherlands S. S. Co.....	April 2.....	April 3.....	163	604
Bogota.....	United Fruit Co.....	April 2.....	April 3.....	174	198
Virgilio.....	Italian Line.....	April 2.....	April 4.....	15	895
Cali.....	Roland Line.....	April 2.....		297	
Knut Nelson.....	Fred Olsen Line.....	April 3.....	April 3.....	(¹)	298
Caldas.....	National Navigation Co.....	April 3.....		148	
Contessa.....	Standard Fruit & S. S. Co.....	April 3.....	April 4.....	203	530
Swiftscout.....	Arrow Oil Co.....	April 3.....	April 4.....	11,614	(²)
Tejon.....	General Petroleum Co.....	April 3.....		10,029	
Galicia.....	Hamburg-American Line.....	April 3.....		35	
Iriona.....	United Fruit Co.....	April 4.....	April 4.....	(¹)	185
San Francisco.....	Hamburg-American Line.....	April 4.....		105	
Santa Rita.....	Grace Line.....	April 4.....		144	

¹ No cargo discharged.² No cargo laded

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Cargo Consigned to Canal Zone for Orders.

The system of consigning cargo to the Canal Zone for orders, that is, of discharging cargo from arriving ships into warehouses operated by the Panama Railroad Company on the piers at the ends of the Canal for subsequent reshipment to other ports, was established April 1, 1925, and has been in continued and satisfactory operation since. The provisions were described in a circular published in THE PANAMA CANAL RECORD of March 18, 1925. In 1926 the Panama Railroad distributed a pamphlet containing a description of the arrangements, samples of the necessary papers, and a statement of charges involved in making use of this method of distribution. Because the charges are modified from time to time, this pamphlet became obsolete with respect to that item and it was decided to incorporate data concerning the handling of cargo for orders in the comprehensive general tariff of The Panama Canal and Panama Railroad presenting the schedule of rates for supplies and services furnished to shipping and allied interests at the Panama Canal. A reference to Canal Zone for orders cargo was included in Tariff No. 10, in effect July 1, 1930, under Item 35, Storage on Piers. Through Supplement No. 5 to Tariff No. 10, dated March 20, 1931, Item 35 has been modified effective April 1, 1931.

The revised item is published in full below:

BALBOA HEIGHTS, C. Z., March 20, 1931.

Supplement No. 5—Tariff No. 10—Item 35—Storage on Piers.

(Effective April 1, 1931.)

1. Transit cargo, routed or unrouted:

For first 35 days after delivery on pier.....	Free
For succeeding 30 days, per ton per day or fraction thereof.....	\$0.03
Thereafter, per ton per day or fraction thereof.....	.05
(All transit cargo, routed or unrouted, shall be removed in the order of arrival.)	

2. Transit baggage:

For first seventy-two hours (3 days) after delivery on pier.....	Free
Thereafter, per piece per week or fraction thereof.....	.25

3. Canal Zone for Orders cargo:

- (a) General merchandise, excepting alcoholic liquors, which is actually received from or definitely consigned for shipment in water-borne commerce, will be warehoused "for orders" at the terminal ports of the Panama Canal by the Panama Railroad Company. The Company, which is a corporation of the State of New York, with the usual rights and liabilities of a corporation, owns modern steel and concrete, fireproof, and ratproof piers at both terminals (Cristobal and Balboa); and space on these piers is available for the storage and handling of goods under the arrangement "for orders." Cold storage space to a limited extent is

available at Cristobal at rates which will be furnished on request. These storage facilities are not operated as a general warehousing business, and are not available for storage of goods originating locally unless definitely consigned beyond the Isthmus.

- (b) The essential working of this system is that goods are stored up to 35 days without charge, and after 35 days at the storage rates hereinafter specified, in custody of the Panama Railroad Company, which issues a negotiable receipt to the consignor, owner, or consignee, in exchange for negotiable bill of lading, and forwards or delivers goods on presentation of the receipt and a form order, "Authority to deliver cargo from storage on piers." Goods so received and stored may be delivered or reforwarded by the consignor, owner, or consignee, in any quantity desired, as he directs, subject to the conditions printed on the warehouse receipt.
- (c) The charges for handling and storing goods consigned to and forwarded or delivered from Canal Zone for Orders are as follows—
 - (1) For handling from ship's side to storage place, or to cars, \$1 per ton on general cargo, and on other commodities, one-half of the transferring rates provided in paragraph 2, Item 34.
 - (2) For handling from storage place to ship's side, or to cars, or for delivery at storage place, the same rates as for receiving, as per (a) above. The minimum charge for handling goods withdrawn from storage place is \$1.
 - (3) Storage: First 35 days after delivery to warehouse, free; thereafter, 3 cents per ton of 2,000 pounds, or $1\frac{1}{2}$ cents per ton of 40 cubic feet per day or fraction thereof.
 - (4) Special rates on special commodities in large quantities may be obtained on request.
- (d) The charge for receiving the goods will be made against the delivering vessel; the charge for taking the goods from storage and delivering to vessels will be made against the receiving vessel. The charge for delivering goods "for orders" locally will be collected from the owner or consignee before the goods will be delivered. The charge for storage will be made against the owner of the goods and will be collected monthly.
- (e) Any rehandling of goods for fumigation or other purposes, or labor for repairing of packages, will be charged for in accordance with the rules and rates for rehandling, repairing, etc., provided in this tariff.

- (f) The Receiving and Forwarding Agent will use his discretion as to what classes of goods may or may not be received and stored under the heading of Canal Zone for Orders. No shipment of goods requiring refrigeration should be made to Canal Zone for Orders without prior definite arrangement with the Receiving and Forwarding Agent.
- (g) The Panama Railroad Company does not insure goods stored in Canal Zone for Orders warehouses. Arrangements for insurance will have to be made by the consignor, consignee, or owner of the goods.
- (h) Goods "for orders" stored on the wharves of the Panama Railroad Company for delivery or reshipment into the Republic of Panama are subject to the customs rules and laws of the Republic of Panama, and to payment of duty.
- (i) As a general policy, various lines operating out of Cristobal and Balboa to the west coast of South and Central America accept their proportion of the through rate from port of origin to port of ultimate destination for the haul beyond the Isthmus, as explained in the following paragraph—
- (j) In connection with the Canal Zone for Orders arrangement, certain steamship lines agree to through billing arrangements by which shippers are enabled to consign goods to the Isthmus and subsequently to reconsign them to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through rate. This means that when goods move from New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward by water to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, plus handling charges from storage place to slings of receiving vessel; and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.
- (k) Under through billing arrangements agreed to by certain steamship lines, goods consigned to either terminal for orders may be reconsigned to points beyond the Isthmus and reforwarded via the Panama Railroad for transshipment at the opposite terminal upon payment of the receiving ocean carrier's proportion of the through freight rate from port of origin to port of ultimate destination, plus handling

charges from storage place to cars. The handling charges from cars to ship's side will be absorbed by the Panama Railroad Company. In this case the Panama Railroad Company's freight charges will be those specified in paragraph 24 (a), Item 34 of this tariff.

- (l) In addition to reconsigning beyond the Isthmus, when agreed to by delivering steamship lines, goods billed Cristobal for orders may be reconsigned to Balboa-Panama City or to line points on the Panama Railroad, and goods consigned Balboa for orders may be reconsigned to Cristobal-Colon or line points on the Panama Railroad, on the basis of through rates from port of origin to Panama City or Colon, as the case may be. In this case the Panama Railroad Company's charges will be the difference between the rate charged to port of steamer discharge by the ocean carrier and the through rate from port of origin to Panama City or Colon, as the case may be, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. In the absence of through rates, goods may be forwarded at regular local rates, as provided in Item 39 of this tariff.
- (m) Goods deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the goods are reforwarded from, or delivered locally at Balboa. The same handling charges will apply, vice versa, on goods "for orders" discharged from vessels at Balboa.
- (n) Goods consigned Balboa for orders via Cristobal, and/or goods consigned Cristobal for orders, on which by previous arrangement the destination has been changed to Balboa for orders prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal, and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the goods are reforwarded from or delivered locally at Balboa. The same handling charges will apply, vice versa, on goods moving under the same conditions in the opposite direction.
- (o) Goods to be warehoused "for orders" should be consigned

"Cristobal for orders" or "Balboa for orders." If the consignee named is not resident on the Isthmus the Panama Railroad Company will receipt for the goods delivered on its piers and transfer such goods to its warehouses, but will not assume any liability except as warehouseman. In case it is desired to reforward the goods or deliver them locally the Panama Railroad Company will act as agent for the owner, consignor, or consignee. The fees for these services are as follows:

Reforwarding goods—

For each outward bill of lading..... \$2.50

Delivering goods—

For each local delivery..... 2.50

- (p) There are no special forms for use in reshipping except the warehouseman's order to release the goods ("Authority to deliver cargo from storage on piers"). The shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local. Samples of the forms used, "Negotiable warehouse receipt" and "Authority to deliver cargo from storage on piers," will be supplied on request to the Panama Railroad Company, Balboa Heights, C. Z., or 24 State Street, New York City.

H. BURGESS,
Governor, The Panama Canal,
President, Panama Railroad Company.

Pan American Day.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 13, 1931.

To all concerned:

The below-quoted Proclamation of the President is published for the information of those concerned.

H. BURGESS,
Governor.

PAN AMERICAN DAY

By the President of the United States of America

A PROCLAMATION

WHEREAS the Governing Board of the Pan American Union, at the session held on Wednesday, May 7, 1930, adopted a resolution reading as follows:

WHEREAS, It would be desirable to recommend the designation of a date which should be observed as "Pan American Day" in all the Republics of America and which should be established as a commemorative symbol of the sovereignty of the American nations and the voluntary union of all in one continental community;

WHEREAS, April 14th is the date on which the resolution creating the Pan American Union was adopted;

The Governing Board of the Pan American Union

RESOLVES:

To recommend that the Governments, members of the Pan American Union, designate April 14th as "Pan American Day" and that the national flags be displayed on that date.

NOW, THEREFORE, I, HERBERT HOOVER, President of the United States of America, in order to give effect to the resolution adopted by the Governing Board of the Pan American Union, do hereby proclaim April 14 as "Pan American Day," and do hereby order that the flag of the United States be displayed on all Government buildings on that date, and do invite the schools, civic associations, and people of the United States generally to observe the day with appropriate ceremonies, thereby giving expression to the spirit of continental solidarity and to the sentiments of cordiality and friendly feeling which the Government and people of the United States entertain toward the peoples and Governments of the other Republics of the American Continent.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 28th day of May, in the year of our Lord
 [SEAL] nineteen hundred and thirty, and of the Independence of the United States of America, the one hundred and fifty-fourth.

HERBERT HOOVER.

By the President:

H. L. STIMSON,
Secretary of State.

Location of Patients and Visiting Hours, at Gorgas Hospital.

The following table shows the distribution of patients in the Gorgas hospital buildings and the visiting hours for the various wards and sections:

Section and Ward.	Visiting Hours.
Section "A:"	
Ward 2, Semi-private, white male.	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 3, American male, eye, ear, nose and throat patients.	Tuesdays, Thursdays and Saturdays, 2.30 to 4.30 p. m., 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 4, Private rooms.	Daily, same as Ward 2 (above).
Section "B:"	
Ward 5, Male, private rooms, American boys.	} Daily, 9.30 to 11.00 a. m.; 2.00 to 4.30 p. m.; 6.30 to 8.00 p. m.
Ward 6, Foreign, male and female, private rooms, American girls.	
Ward 7, White females, private rooms.	
Ward 8, Obstetrical department, white females.	} No visitors permitted in nursery.
Nursery.	
Section "C:"	
Ward 9, Colored, male.	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 10, White foreign, male.	
Ward 11, Colored, male (surgical).	
Ward 12, Colored, male (medical).	} Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Ward 13, Colored, male, G. U.	
Ward 14, White, male, G. U.	Tuesdays, Thursdays, Saturdays, Sundays, and holidays, 2.30 to 4.30 p. m.
Section "D:"	
Ward 15, American, male (surgical).	} Tuesdays, Thursdays, Saturdays, Sundays and holidays, 2.30 to 4.30 p. m.; 6.30 to 7.30 p. m. Sundays and holidays, 9.30 to 11.00 a. m.
Ward 16, American, male (medical).	
Ward 17, Colored children.	Wednesdays, Fridays, Sundays, and holidays, 1.30 to 3.00 p. m.
Ward 18, White children.	Daily, 9.30 to 11.00 a. m.; 2.00 to 4.00 p. m.
Ward 19, Colored, female (medical).	} Wednesdays, Fridays, Sundays and holidays, 1.30 to 3.00 p. m.
Ward 20, Colored, female, surgical, obstetrical.	
Isolation section.	No visitors permitted except to visit tuberculosis patients Thursdays, Sundays and holidays, 1.30 to 3.00 p. m.

Permission to visit outside of visiting hours may be granted upon application to the Superintendent's Office.
 Immediate relatives of seriously ill patients will be admitted at any time by and in the discretion of the attending physician, section nurse, and in her absence, the nurse in charge.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address

The Panama Canal Record, Balboa Heights, Canal Zone, or

The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office

at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 22, 1931. No. 38.

Cargo Through the Canal During March, 1931.

On pages 544 and 545 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in March, 1931. This cargo, segregated according to direction as compared with March, 1930, and the differences, are shown in the following tabulation:

	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	741,986	499,617	-242,369
Pacific to Atlantic.....	1,816,252	1,415,890	-400,362
Total.....	2,558,238	1,915,507	-642,731

It will be noted from the above that the Atlantic to Pacific tonnage decreased 242,369 tons (32.7 per cent) as compared with March, 1930, and that from the Pacific to Atlantic decreased 400,362 tons (22.0 per cent), making a total decrease in cargo tonnage in both directions of 642,731 tons (25.1 cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-nine (69) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States (in comparison with 70.7 per cent of the total in March, 1930), and 22.8 per cent in Europe (21.7 per cent in March, 1930), these two areas contributing to almost 92 per cent of the cargo moving in this direction in March, 1931. In comparison with March, 1930, tonnage from the United States declined 179,633 tons, or 34.2 per cent, while that from Europe decreased 46,829 tons, or 29.1 per cent. As shown above, the percentage of the total cargo originating in the United States was slightly lower also than in March, 1930, while that coming from Europe was slightly higher in March, 1931.

Destination.—Forty-seven and eight-tenths (47.8) per cent of the Pacific-bound cargo tonnage was destined to the United States; 20.7 per cent to Asia; 12.2 per cent to Australasia; and 11.1 per cent to South America. Tonnage to all these areas decreased as follows in comparison with March, 1930: To the United States, 101,199 tons, or 29.7 per cent; to Asia, 73,783 tons, or 41.6 per cent; to Australasia, 30,212 tons, or 33.2 per cent; and to South America, 47,636 tons, or 46.1 per cent. In its relation to the total cargo, the percentage destined to the United States last month was higher than in March, 1930, while that to Asia and South America was lower in March, 1931. The percentage going to Australasia was approximately the same last month as in March, 1930.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 47.8 per cent came from the United States; 23.3 per cent from South America; 12.0 per cent from Canada; 7.5 per cent from Asia; and 7.1 per cent from Australasia. Cargo tonnage originating in Australasia showed a proportionate as well as an actual increase of 14,439 tons, or 16.6 per cent, in comparison with March, 1930, while that coming from the other before-mentioned areas decreased as follows: From the United States, 210,643 tons, or 23.7 per cent; from South America, 141,237 tons, or 30.0 per cent; from Canada, 32,820 tons, or 16.2 per cent; and from Asia, 37,895 tons, or 26.4 per cent. The percentages of the total cargo originating in the United States, South America, and Asia also declined in comparison with March, 1930, while that from Canada was higher.

Destination.—Segregated according to destination, 55.9 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 37.1 per cent to Europe. Tonnage to the United States decreased 316,302 tons, or 28.5 per cent, in comparison with March, 1930, and that to Europe declined 81,009 tons, or 13.4 per cent. In the proportions to the total cargo, the tonnage to United States was lower and that to Europe was higher in March, 1931.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 86 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of March, 1931. The remaining 14 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for March, 1930, or March, 1931, are listed in the following tabulation, showing differences:

Commodity.	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia	10,959	6,315	-4,644
Automobiles	19,549	10,110	-9,439
Cement	19,507	13,379	-6,128
Coal and coke	11,654	11,824	+170
Cotton	19,930	29,055	+9,125
Manufactured goods:			
Iron and steel	170,591	101,870	-68,721
Machinery	13,817	13,468	-349
Railroad material	14,842	6,900	-7,942
Tinplate	31,016	19,828	-11,188
Miscellaneous	19,499	17,353	-2,146
Metal, scrap	20,551	3,641	-16,910
Oils, mineral	50,935	26,614	-24,321
Paper	17,335	13,521	-3,814
Phosphates	33,905	18,302	-15,603
Silversand	11,050	.....	-11,050
Slag	15,322	6,485	-8,837
Sugar	13,290	1,770	-16,520
Sulphur	14,303	15,883	+1,580

The above 18 commodity groups for March, 1931, comprise 63.3 per cent of the cargo moving from the Atlantic to the Pacific. Except for a substantial increase in the shipments of cotton and two other smaller increases, all of the above listed commodities decreased in comparison with March, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 99 per cent of the cargo moving from the Pacific to the Atlantic during the month of March, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	March, 1930.	March, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	21,662	21,935	+273
Beans.....	9,847	12,118	+2,271
Canned goods (fish, fruit, vegetables, etc.).....	83,061	79,992	-3,069
Coffee.....	23,039	19,609	-3,430
Cold storage (food products) ¹	44,077	50,239	+6,162
Copra.....	5,509	10,323	+4,814
Flour.....	9,109	17,938	+8,829
Fruit, dried.....	15,297	25,090	+9,793
Fruit, fresh.....	14,142	42,402	+28,260
Lumber.....	300,515	207,106	-93,409
Metals, various.....	64,122	58,323	-5,799
Nitrates.....	147,762	104,468	-43,294
Oils, mineral.....	420,040	285,509	-134,531
Ores, principally iron.....	230,446	93,834	-136,612
Paper.....	13,851	11,425	-2,426
Paper pulp.....	10,736	8,951	-1,785
Rice.....	12,506	11,947	-559
Sugar.....	118,316	117,721	-595
Wheat.....	150,034	110,742	-39,292
Wool.....	16,592	23,935	+7,343

¹ Does not include fresh fruit.

The above 20 commodity groups for March, 1931, comprise 92.8 per cent of the cargo moving from the Pacific to the Atlantic. Eight of the items show increases over March, 1930, while 12 show decreases. Practically all of the normally important items, such as mineral oils, lumber, ores, and wheat, registered heavy decreases. The most important increase was that of fresh fruit, the majority of which was routed from the United States to Europe.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending April 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Rita.....	Grace Line.....	April 3.....	April 4.....	44	2
Chateau Thierry.....	U. S. Government.....	April 4.....	April 7.....	301	38
City of Panama.....	Panama Mail S. S. Co.....	April 4.....	April 4.....	37	
Suriname.....	United Fruit Co.....	April 4.....	April 5.....	448	
Chaumont.....	U. S. Government.....	April 6.....	April 7.....		15
Colombia.....	Panama Mail S. S. Co.....	April 8.....	April 8.....	7	
Venezuela.....	Panama Mail S. S. Co.....	April 8.....	April 9.....	75	
Benjamin Franklin.....	Fred Olsen & Co.....	April 8.....	April 10.....	2,199	1
Kenowis.....	U. S. Government.....	April 9.....	April 10.....	598	14
Somme.....	U. S. Government.....	April 10.....	April 10.....	2	8
Santa Teresa.....	Grace Line.....	April 11.....	April 11.....	162	1
Cauca.....	National Navigation Co.....	April 11.....	April 11.....		25
La Perla.....	United Fruit Co.....	April 12.....	April 13.....	306	
Santa Barbara.....	Grace Line.....	April 13.....	April 13.....	12	
U. S. Grant.....	U. S. Government.....	April 13.....	April 13.....	136	5
Bulysees.....	Anglo-Saxon Petroleum Co.....	April 13.....	April 16.....	9,183	
Nosa King.....	N. O. & S. A. S. S. Co.....	April 14.....	April 14.....	104	
Salvador.....	Pacific Steam Navigation Co.....	April 15.....	April 15.....		1
Buenos Aires.....	Johnson Line.....	April 15.....	April 15.....	84	
Loriga.....	Pacific Steam Navigation Co.....	April 16.....	April 16.....		50
Heiyo Maru.....	Nippon Yusen Kaisha.....	April 17.....	April 17.....	60	
Virginia.....	Panama-Pacific Line.....	April 17.....	April 17.....		199
President Fillmore.....	Dollar Line.....	April 17.....	April 17.....		1

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, March, 1931.—Continued from page 543.
(Figures represent tons of 2,240 pounds.)

From —	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.				ASIA.					Grand total.	Per cent of total cargo.	
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. *	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. †	Total, South America.	Australia.	New Zealand.	Australasia. †	Total, Australasia.	Philippine Islands.	China.	Japan.			Far East. †	Total, Asia.
NORTH AMERICA:																						
UNITED STATES—																						
North Atlantic ports.....	149,628	230,148	297,896	160,269	10,685	1,626	438,356	514	16,898	3,758	4,819	8,577	8,565	10,764	14,923	5,703	39,955	225,629	45.1			
South Atlantic ports.....	5,418	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	
Gulf ports.....	46,358	882	390	915	43,545	1,944	171	85	251	373	2,824	65	2,238	2,044	4,282	10,365	21	716	11,608	40,922	4,477	57,783
Total, United States.....	201,404	1,112,148	1,287,981	214,832	12,694	1,797	523,386	887	19,717	3,758	4,819	8,577	8,565	10,764	14,923	5,703	39,955	225,629	45.1			
East coast of Canada.....	2,427	3,665	3,146	6,092	6,103	1,155	1,075	461	374	1,091	4,156	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	9,874
Cristobal, C. Z. *	2,957	3,146	3,146	6,103	6,103	1,155	1,075	461	374	1,091	4,156	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	10,259
West Indies.....	159	2,335	3,789	6,283	6,283	1,155	1,075	461	374	1,091	4,156	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	3,782	6,283
Total, North America.....	206,947	7,112,429	5,076,981	233,310	13,849	2,872	984,190	1,978	23,873	3,758	8,601	12,359	11,519	22,432	57,889	10,180	102,020	371,562	74.4			
EUROPE:																						
British Isles.....	2,716	3,415	6,131	5,247	6,131	5,247	110	1,237	6,594	34,131	6,619	40,750	53,475	10.7								
Belgium.....	4,810	2,383	749	7,942	3,258	293	1,530	467	5,548	4,376	1,917	6,293	19,783	4.0								
Denmark.....	31	31	31	31	31	31	21	121	1,142	1,517	1,517	1,517	6,727	1.3								
France.....	3,657	357	50	4	5,645	463	122	243	1,666	809	3,303	3,303	8,995	1.8								
Germany.....	4,007	866	760	12	1,158	1,942	214	73	834	3,063	1,283	1,283	4,221	0.8								
Holland.....	1,119	39	402	2	1,886	1,197	86	1,197	605	168	6,343	6,343	3,169	0.6								
Italy.....	1,449	33	402	2	6,335	3,632	661	1,277	68	2,068	2,068	2,068	12,678	2.5								
Norway and Sweden.....	2,480	611	452	2,335	2,189	332	68	408	8	338	0.1	338	0.1									
Spain and Portugal.....	30	26	74	130	2,189	332	68	408	8	338	0.1	338	0.1									
Europe †.....	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	2,189	4,257
Total, Europe.....	22,488	7,180	3,494	2,353	35,515	17,068	1,290	3,254	5,087	3,053	29,752	38,507	10,053	48,560	113,827	22.8						
East coast of South America.....	9,661	1,165	10,826	10,826	10,826	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	2,021	14,228
Grand total.....	239,096	15,457	7,787	4,299	9,881	279,651	30,917	6,183	4,238	9,277	5,031	55,646	3,758	47,108	108,053	60,919	11,519	22,432	59,270	10,180	103,401	499,617
Per cent of total cargo:																						
March, 1931.....	47.8	3.1	1.6	1.5	2.0	56.0	6.1	1.2	0.8	1.9	1.1	11.1	0.8	9.4	2.0	12.2	2.3	4.5	11.9	2.0	20.7	100.0
March, 1930.....	45.8	1.8	0.9	0.2	1.2	49.9	6.0	0.5	0.9	1.8	4.7	13.9	4.5	7.8	2.0	12.3	2.2	4.8	12.1	4.8	23.9	100.0
March, 1929.....	40.3	3.5	3.0	0.1	0.2	47.1	6.4	1.4	0.4	2.2	4.2	14.6	6.0	8.9	1.0	15.9	2.3	6.1	11.3	2.7	22.4	100.0

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, March, 1931.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.										EUROPE.										Grand total.	Per cent of total cargo.		
	UNITED STATES.					CENTRAL AMERICA.					WEST INDIES.					EUROPE.								
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Total, Europe.	East coast of South America.			Egypt.	Africa.
NORTH AMERICA:																								
W. coast United States.	454,575	4,893	20,306	479,774	306	2,398	4,622	487,100	85,248	3,581	106,177	207,266	169,111	951,430	2,780	592	31,655	183,591	5,645	360	676,696	47.8		
West coast of Canada.	20,926	56	20,982	7,957	3,530	32,469	71,773	3,908	10,371	193	3,107	471,189	394,376	275	4,437	34,251	132,617	5,201	12	170,289	12.0			
W. coast Cen. America.	2,380	16,271	18,651	36,922	10,371	18,651	28,022	37,223	56,244	10,371	193	3,107	471,189	394,376	275	4,437	34,251	132,617	5,201	14,808	1.0			
Hawaiian Islands.	2,380	16,271	18,651	36,922	10,371	18,651	28,022	37,223	56,244	10,371	193	3,107	471,189	394,376	275	4,437	34,251	132,617	5,201	18,651	1.3			
Total, N. America.	477,881	4,893	36,633	519,407	7,957	306,127	7,957	8,152	548,591	157,214	7,589	109,283	608,299	859,183	309,456	7,498	592	66,181	320,645	10,846	372	880,454	62.1	
SOUTH AMERICA:																								
Chile.	117,970	7,950	16,083	142,013	564	893	2,119	145,589	15,860	1,842	28	7,767	1,977	786	1,472	5	40,892	70,629						
Colombia.	1,659			1,659	2,027	7	3,693																	
Ecuador.	9,083			9,083	1,428		10,511																	
Peru.	6,276			6,276	96		47,182	23,049	449,197	8,785	99	314	1,726	435	134									
W. coast S. America.	144			144	236	6	386			3	300				500									
Total, S. America.	135,132	7,950	16,083	159,175	40,810	564	4,680	2,132	207,361	38,912	11,376	2,006	8,180	4,203	1,355	1,472	5	53,441	120,950	485				
ASIA:																								
Australia.	7,963			7,963	705																			
New Zealand.	692			692	127		85																	
Australasia.	7,714			7,714																				
Total, Australasia.	16,369			16,369	832		85																	
Philippine Islands.	66,795			66,795																				
China.	4,485			4,485																				
Japan.	6,443			6,443																				
Far East.	2,230			2,230																				
Total, Asia.	79,953			79,953																				
Grand total.	709,335	12,843	69,249	791,427	49,599	870	17,964	18,792	878,652	275,216	18,965	2,115	41,638	34,062	19,754	4,596	8,970	597	119,622	525,535	11,331	372	1,415,890	100.0
Per cent of total cargo:																								
March, 1931.	50.1	0.9	4.9	55.9	3.5	...	1.3	1.3	62.1	19.5	1.3	0.2	2.9	2.4	1.4	0.3	0.6	...	8.5	37.1	0.8	100.0
March, 1930.	55.0	1.4	4.6	61.0	1.5	0.1	1.0	1.5	65.1	15.3	0.3	0.3	2.0	2.5	1.0	0.1	0.8	0.5	10.6	33.4	0.6	0.9	...	100.0
March, 1929.	48.1	3.2	4.2	55.5	1.5	...	1.2	0.8	59.0	17.9	0.9	0.9	0.9	4.1	1.6	...	1.3	0.4	13.9	41.0	100.0

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

Salvador	8	20	10	15	9	45	15	17	48	15	18	38	British	Pacific Steam Nav. Co.	215.0	33.5	16.7	Cristobal, C. Z.	Champerio, Guat.	General	1,065	1,270	735
Ferenglen	15	11	05	15	11	15	18	09	15	19	00	Norwegian		Fern Line	335.3	54.5	23.0	New Orleans, La.	Oaaka, Japan	Phosphate, gen.	5,050	6,615	4,859
Buenos Aires	14	18	15	15	12	19	15	20	40	16	00	Swedish		Johnson Line	426.9	56.2	17.6	Stockholm, Sweden	San Francisco, Cal.	General	2,287	7,591	5,661
Montevideo	15	12	25	15	13	15	15	24	15	22	50	Japanese		Oaaka Shosen Kaisha	430.0	55.0	21.5	Buenos Aires, Arg.	Kobe, Japan	Cotton, wheat	3,040	7,875	5,821
Maru	15	15	15	15	15	15	15	15	15	15	15	American		A. Ferrari				Cristobal, C. Z.	Gatun, C. Z.	Towing barge			
Barge	15	15	15	15	15	15	15	15	15	15	15	American		No. 31036				Gatun, C. Z.	Gatun, C. Z.	Ballast			
Western Sun	15	16	45	15	16	55	16	9	25	16	11	05	American	Sun Oil Co.	480.6	66.0	22.0	Chester, Pa.	Los Angeles, Calif.	Ballast		9,607	6,551
Cape Cornwall	16	6	00	16	6	50	16	13	40	16	14	05	British	Lyle Shipping Co.	405.0	53.0	17.6	Middlesbrough, Eng.	Vancouver, B. C.	Steel plates, etc.	2,053	5,741	4,088
City of	16	11	15	16	11	30	16	21	14	16	22	28	British	Brit. Can. Steamships	411.5	54.1	16.0	Sydney, N. S.	Vancouver, B. C.	Steel rails, etc.	609	6,597	4,989
Lorica	16	5	25	16	14	09	16	22	09	17	6	11	British	Pacific Steam Nav. Co.	406.0	54.2	23.7	Hull, England	Valparaiso, Chile	General, cement	6,396	7,331	5,091
Santa Maria	16	12	55	16	16	17	16	22	40	17	12	30	American	Grace Line	465.0	64.0	24.0	New York, N. Y.	Talcahuano, Chile	General	1,935	10,625	6,080
Villa de	16	6	55	17	6	15	17	13	29	17	14	30	French	Messageries Maritimes	409.0	53.5	22.10	Dunkirk, France	Noumea, New Cal.	General	1,700	7,677	5,633
Strasbourg	16	12	45	17	6	15	17	14	04	17	15	05	French	French Line	425.0	55.0	19.0	Havr, France	Corral, Chile	Iron, cement, etc.	1,274	6,982	4,384
President	17	5	00	17	7	25	17	15	53	17	21	40	American	Dollar Line	609.0	63.3	25.0	New York, N. Y.	San Francisco, Cal.	General	3,504	17,054	11,542
Fillmore	17	5	45	17	7	25	17	15	53	17	13	30	American	Panama-Pacific Line	586.4	80.3	25.9	New York, N. Y.	San Francisco, Cal.	Autos, general	7,369	25,254	18,170
Shenmuestad	16	19	15	17	8	40	17	16	39	17	17	40	Norwegian	Fern Line	376.5	53.8	14.5	Norfolk, Va.	Vancouver, B. C.	Ballast			4,663
Stollman	17	5	55	17	9	00	17	17	14	17	23	48	British	Inter. Petroleum Co.	505.0	75.6	26.0	New York, N. Y.	Talara, Peru	Ballast		16,780	9,835
Nyhaug	17	6	35	17	9	15	17	17	55	17	19	00	Norwegian	Canadian Transport Co.	330.7	51.5	13.0	Baltimore, Md.	Portland, Oreg.	Ballast		4,788	3,347
Silvervev	17	11	40	17	11	55	17	18	40	17	20	00	British	Kerr S. S. Co.	431.0	61.0	17.0	New York, N. Y.	Jaya, D. E. I.	General	3,005	9,309	6,522
Lake Benbow	17	12	40	17	12	55	17	20	30	18	00	53	American	Ford Motor Co.	230.0	45.0	21.0	Chester, Pa.	Seattle, Wash.	Automobile parts	2,589	2,676	1,797
Edgar F.	17	13	30	17	13	45	17	21	14	17	23	30	American	Lockenbach Line	425.0	57.2	26.6	Houston, Texas	Tacoma, Wash.	General	5,353	8,508	6,048
Rotorua	17	14	50	17	15	10	17	23	15	18	13	45	British	N. Z. Shipping Co.	526.0	61.4	22.11	London, England	N. Plymouth, N. Z.	General	3,596	12,846	9,439
Nordval	17	17	40	17	21	00	18	9	27	18	19	39	Danish	Inter. Freighting Co.	380.0	53.0	17.10	New York, N. Y.	Antofagasta, Chile	General	3,000	6,194	4,467
Gen. G. W.	17	17	40	17	21	00	18	9	27	18	19	39	Danish	Inter. Freighting Co.	380.0	53.0	17.10	New York, N. Y.	Antofagasta, Chile	General	3,000	6,194	4,467
Getty	17	13	00	18	13	00	18	20	15				American	U. S. Army	89.0	22.0		Cristobal, C. Z.	Gatun, C. Z.	Ballast			
Fremont	17	20	00	18	6	25	18	13	33	18	14	25	British	R. Chapman & Son	436.3	60.3	17.0	Tyne, England	Vancouver, B. C.	Ballast		8,144	6,028
Treythoe	18	00	30	18	7	35	18	14	43	18	15	50	British	Foster-Ham-Read Co.	309.9	51.0	15.0	Cardiff, England	Portland, Oreg.	Ballast		5,179	3,928
Livingston	18	00	30	18	7	35	18	14	43	18	15	50	British	Foster-Ham-Read Co.	309.9	51.0	15.0	Cardiff, England	Portland, Oreg.	Ballast		5,179	3,928
Roe	18	8	50	18	9	00	18	17	04	18	18	10	American	Richfield Oil Co.	462.0	60.0	20.0	Christiansburg, S. C.	Los Angeles, Calif.	General	8,491	6,065	
Manizales	12	16	25	18	9	20	18	17	51	18	19	00	German	Roland Line	216.5	32.9	12.0	Cristobal, C. Z.	Guayaquil, Ecuador	Ballast	178	1,132	741
West Mahwah	18	15	30	18	15	43	18	22	50	19	10	10	American	Pac. Arc. & Brazil Line	410.5	51.0	19.3	Buenos Aires, Arg.	Seattle, Wash.	General	3,914	6,588	5,049

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

6 Bones, coffee, nuts, cocoa, etc.

3 Tug.

4 Launch.

1 Tanker.

Agaworth	12	2	00	12	6	36	12	14	45	12	14	45	American	Richfield Oil Co., Calif.	429.0	59.2	26.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline	15,581	7,730	5,615
Recorder	11	22	30	12	7	02	12	16	20	13	00	10	British	T. & J. Harrison	420.3	54.6	25.2	Vancouver, B. C.	Liverpool, England	General	7,740	6,632	4,402
Manizales	12	7	15	12	8	05	12	16	25				German	Roland Line	216.5	32.9	16.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	580	1,132	741
Arana	12	9	10	12	10	06	12	17	10	13	14	10	British	Pacific Steam Nav. Co.	303.4	43.0	16.0	Callao, Peru	England	General	1,041	2,851	1,776
Scottish	12	10	50	12	11	42	12	19	40	12	23	30	British	Anglo-Saxon Pet. Co.	441.0	67.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Kerosene	8,934	7,571	4,840
Chief	12	13	09	12	14	03	13	05	13	13	05	13	American	The Texas Co.	409.9	58.1	31.0	Los Angeles, Calif.	Port Arthur, Texas	Gas oil	16,173	10,853	8,271
California	12	17	55	12	18	45	13	11	30	13	11	30	British	R. Chapman & Son	412.0	55.3	24.5	Vancouver, B. C.	London, England	General	9,628	6,823	4,797

7 For orders.

1 Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.									
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Gross.	Net.							
Wisconsin.	12	21	40	13	6	20	13	13	45	14	00	45	French.	French Line.	470	3	61	2	26	5	Vancouver, B. C.	Havre, France.	Lumber, general.	8,430	10,450	7,110
Delridge.	13	5	25	13	7	09	13	13	38	N. Pacific Coast Line.	400	8	54	7	30	0	General.	9,038	11,724	8,266	Vancouver, B. C.	Rotterdam, Holl'd.	General.	9,038	11,724	8,266
Emil Kirdorf.	13	8	43	13	7	15	13	16	20	Hamburg-American Line.	409	8	53	24	4	General.	6,437	7,114	5,408	Hamburg, Germany.	Norfolk, Va.	General.	6,437	7,114	5,408	
Delight.	13	9	15	13	9	55	13	17	30	Swayne & Hoyt.	379	9	53	1	23	0	General, sugar.	5,912	5,607	4,108	Portland, Ore.	Norfolk, Va.	General.	5,912	5,607	4,108
Pat.	13	9	25	13	13	11	13	20	40	Charles Morgan.	430	0	64	0	25	0	Ballast.	4,528	10,637	6,633	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	4,528	10,637	6,633
Santa Barbara.	13	9	25	13	13	11	13	20	40	Grace Line.	430	0	64	0	25	0	General.	4,528	10,637	6,633	New York, N. Y.	Cristobal, C. Z.	General.	4,528	10,637	6,633
La Perla.	12	12	20	13	13	52	13	22	35	United Fruit Co.	325	2	43	1	19	0	General.	653	4,063	2,261	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	653	4,063	2,261
Commander McCaulley.	13	13	52	13	13	52	13	22	35	U. S. Navy.	427	0	54	0	25	4	Ballast.	7,746	6,014	4,995	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	7,746	6,014	4,995
City of Vancouver.	13	13	20	13	14	25	13	23	25	Vancouver S. S. Co.	427	0	54	0	25	4	General.	7,746	6,014	4,995	Vancouver, B. C.	Leith, Scotland.	General.	7,746	6,014	4,995
Grant.	13	6	40	13	14	34	13	23	05	U. S. Army.	508	0	55	0	25	0	Army stores.	7,213	6,04	4,852	San Francisco, Cal.	New York, N. Y.	General.	7,213	6,04	4,852
Barbara Cates.	13	14	45	13	16	45	13	12	00	Sidden & Christenson.	409	5	54	2	23	4	Lumber, pulp.	5,750	5,125	3,741	Tacoma, Wash.	Boston, Mass.	General.	5,750	5,125	3,741
Romulus.	12	19	40	13	17	48	13	13	29	Wiel & Amundsen.	347	7	80	0	24	0	Grain.	5,550	25,262	18,194	Aruba, D. W. I.	New York, N. Y.	General.	5,550	25,262	18,194
Pennsylvania.	13	9	35	14	6	15	14	15	15	Panama-Pacific Line.	586	4	89	3	30	0	General.	9,131	7,773	5,634	San Francisco, Cal.	Bayonne, N. J.	General.	9,131	7,773	5,634
Pat Dobony.	13	17	40	14	6	45	14	16	05	Richfield Oil Co.	430	0	59	2	27	0	Gasoline.	9,099	7,437	5,216	Los Angeles, Calif.	Baltimore, Md.	General.	9,099	7,437	5,216
Washington.	14	2	45	14	7	23	14	18	29	The Texas Co.	425	8	56	0	26	0	Gasoline.	7,503	7,827	5,442	Vancouver, B. C.	Glasgow, Scotland.	General.	7,503	7,827	5,442
Gregalia.	13	13	30	14	7	40	14	17	03	Donaldson Brothers.	425	0	56	0	27	0	General.	5,487	7,032	6,038	Portland, Ore.	London, England.	General.	5,487	7,032	6,038
Fordsdale.	13	17	09	14	8	15	14	18	40	Aberdeen Com'lth Line.	500	0	63	2	24	0	General.	7,715	9,032	6,038	Sydney, Australia.	Portland, Ore.	General.	7,715	9,032	6,038
Nebraska.	13	19	05	14	8	45	14	19	25	Amer.-Hawaiian Line.	471	1	59	1	25	0	General.	7,401	6,755	4,887	Portland, Ore.	Philadelphia, Pa.	General.	7,401	6,755	4,887
San Angelito.	13	21	50	14	9	15	14	20	55	Quaker Line.	410	5	54	2	27	0	General.	7,540	7,947	5,987	Portland, Ore.	Boston, Mass.	General.	7,540	7,947	5,987
Susan V.	14	4	00	14	9	52	14	19	55	Lockenbach Line.	434	3	57	7	26	0	General.	5,615	5,441	3,712	Portland, Ore.	Rotterdam, Holl'd.	General.	5,615	5,441	3,712
Topoka.	14	18	03	14	19	18	15	11	10	Canadian Transport Co.	366	3	51	2	25	0	Lumber, wheat.	4,806	7,704	4,705	Olympia, Wash.	New York, N. Y.	General.	4,806	7,704	4,705
Aconagua.	14	22	45	15	6	44	15	14	10	S. American S. S. Co.	422	8	56	2	28	0	General.	8,993	8,460	6,162	Valparaiso, Chile.	London, England.	General.	8,993	8,460	6,162
San Julian.	15	5	40	15	7	25	15	15	39	States S. S. Co.	468	5	58	5	26	0	General.	5,430	5,719	4,023	Vancouver, B. C.	Baltimore, Md.	General.	5,430	5,719	4,023
San Gabriel.	15	7	39	15	8	21	15	16	35	States S. S. Co.	385	8	52	2	22	3	General.	7,662	6,447	4,757	Seattle, Wash.	Sharpness, Eng.	General.	7,662	6,447	4,757
Bronzo.	15	7	59	15	8	37	15	17	39	Canadian Transport Co.	390	5	52	7	25	0	General.	3,344	3,256	2,010	Vancouver, B. C.	New Orleans, La.	General.	3,344	3,256	2,010
Noss Chief.	15	9	40	15	10	15	15	18	15	N. O. & S. A. S. S. Co.	299	4	45	0	20	0	General.	2,146	15,424	4,421	Valparaiso, Chile.	Sparrows Pt., Md.	General.	2,146	15,424	4,421
Peru.	15	10	15	15	12	15	15	22	20	Gahagan Corp., N. Y.	166	0	40	1	9	0	General.	2,399	6,869	5,131	Callao, Peru.	Cristobal, C. Z.	General.	2,399	6,869	5,131
Svealand.	15	15	30	15	17	14	16	13	19	Ore S. S. Corp.	561	1	72	2	34	4	General.	8,993	7,106	4,962	Cruz Grande, Chile.	Aruba, D. W. I.	General.	8,993	7,106	4,962
Villager.	15	16	20	15	17	29	16	10	55	Westfall, Larsen & Co.	398	0	54	7	18	0	General.	2,239	6,869	5,131	Valparaiso, Chile.	Aruba, D. W. I.	General.	2,239	6,869	5,131
Sacramento.	15	18	20	15	18	02	16	1	10	U. S. Navy.	424	0	60	0	14	0	General.	8,993	7,106	4,962	Vancouver, B. C.	Cristobal, C. Z.	General.	8,993	7,106	4,962
Menique.	15	21	30	16	6	26	16	14	39	U. S. Navy.	424	0	60	0	14	0	General.	2,399	6,869	5,131	Balboa, C. Z.	Aruba, D. W. I.	General.	2,399	6,869	5,131
Bulyssea.	15	21	30	16	6	26	16	14	39	Desmarais Freres.	424	0	60	0	14	0	General.	8,993	7,106	4,962	Los Angeles, Calif.	Cristobal, C. Z.	General.	8,993	7,106	4,962
Gen. G. W.	15	21	30	16	6	26	16	14	39	Anglo-Saxon Pet. Co.	440	3	59	5	19	0	General.	8,037	7,106	4,962	Balboa, C. Z.	Aruba, D. W. I.	General.	8,037	7,106	4,962
Getty.	15	21	30	16	7	23	16	15	45	U. S. Army.	98	0	62	7	28	0	General.	12,281	10,034	7,388	Balboa, C. Z.	Cristobal, C. Z.	General.	12,281	10,034	7,388
China Arrow.	15	16	55	15	7	19	16	15	45	Standard Transp. Co.	488	3	62	0	27	0	General.	12,281	10,034	7,388	Los Angeles, Calif.	New York, N. Y.	General.	12,281	10,034	7,388
Tanker.	Lumber, wheat, and general.																	11 Copper, lumber, and general.								
12.	Motor ship.																	11 Cruiser.								
13.	Dredge, towed by tug Favorite.																	11 Launch.								
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97.	Motor ship.																	11 Launch.								
98.	Motor ship.																	11 Launch.								
99.	Motor ship.																	11 Launch.								
100.	Motor ship.																	11 Launch.								

**Copper, lumber, and general.

**Tag.

**Cruiser.

**Dredge, towed by tug Favorite.

**Launch.

**Motor ship.

**Lumber, wheat, and general.

**Tanker.

Tatsuma Maru.	15	17	05	16	8	05	16	16	35	16	17	35	Japanese.	Tatsuma S. S. Co.	423	5	55	6	25	0	Manila, P. I.	Philadelphia, Pa.	Sugar.	8,000	6,703	4,959
Liberator.	15	19	40	16	9	03	16	18	05	16	18	05	American.	Rampa Intercoac Co.	426	0	56	0	25	4	Mañila, P. I.	East coast, U. S. A.	General.	9,923	8,204	6,196
Baarn.	16	00	30	16	9	16	16	19	33	17	1	25	Dutch.	Royal Neth. S. S. Co.	400	6	58	0	29	4	Corral, Chile	Hamburg, Germany	Nitrates, general.	7,948	7,819	6,101
Durazzo.	16	8	40	16	9	39	16	19	40				German.	Hamburg-American Line	227	5	34	4	13	0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	385	1,632	1,041
Scota and																										
Barge.	16	16	05	16	9	32	16	18	15	19	8	00	American.	U. S. Navy	155	0	30	0			Batboa, C. Z.	Cristobal, C. Z.	(16)			
Taurco.	16	4	30	16	10	10	16	20	35	16	23	50	British.	Slaw, Savill & Albion.	478	0	63	2	22	0	N. Plymouth, N. Z.	London, England	Frozen, general.	4,379	11,192	8,149
Indian s.	16	7	05	16	10	39	16	20	45	16	20	45	Danish.	East Asiatic Co.	390	0	53	2	28	0	Vlad ock, U. S. S. R.	Stettin, Germany	Soya beans	7,908	6,173	4,418
Yerkmar.	16	11	35	16	12	38	16	21	35	16	21	35	American.	Calmar S. S. Corp.	409	8	54	2	26	0	Olympia, Wash.	New York, N. Y.	Lumber	6,814	6,757	4,802
Calgarolite s.	16	11	45	16	12	53	16	22	10	16	22	10	British.	Imperial Oil Co., Ltd.	521	5	70	4	31	5	Tadara, Peru	Montreal, Canada	Crude oil	16,450	12,339	7,717
Rangitata s.	16	6	10	16	13	47	16	22	50	16	22	50	British.	N. Z. Shipping Co.	531	0	70	2	29	0	Wellington, N. Z.	London, England	Frozen, general.	5,550	18,206	13,507
Hollywood.	16	12	15	16	14	16	16	23	20	16	23	20	American.	McCormick S. S. Co.	410	5	54	3	23	5	Cristobal, C. Z.	Buenos Aires, Arg	General.	5,466	6,584	5,080
Caldas s.	16	15	16	18	02	17	13	55	17	22	00	Colombian.	National Navigation Co.	116	0	21	1	7	0	Pro. Armuelles	Cristobal, C. Z.	Ballast		211	124	
Panama.	17	5	05	17	6	50	17	13	55	17	13	55	American.	Amer-Hawaiian Line	407	7	53	7	25	0	Seattle, Wash.	New York, N. Y.	General	6,025	7,097	5,865
Laebok.	17	8	50	17	9	31	17	19	55	17	19	55	German.	Gahagan Corp., N. Y.	281	7	44	1	14	0	Callao, Peru	Cartagena, Col.	Dredging mat'l.	5,770	5,571	1,837
Pacific Spruce.	17	10	05	17	10	52	17	18	30	17	18	30	American.	Dimon S. S. Corp.	410	5	54	0	26	0	Seattle, Wash.	Norfolk, Va.	Lumber, general	6,897	6,624	4,757
Stjerneborg s.	17	11	50	17	12	24	17	19	55	17	19	55	Danish.	Strangs & Co.	380	0	53	9	25	0	Vancouver, B. C.	New York, N. Y.	Lumber	5,650	6,219	4,691
Chile s.	17	14	30	17	15	52	17	23	10	18	1	35	Danish.	East Asiatic Co.	425	0	65	2	28	0	Vancouver, B. C.	Copenhagen, Den.	General	9,638	7,382	5,663
Rockstar.	17	13	37	17	18	24	18	2	50	18	8	20	American.	U. S. Navy	384	0	54	9	26	2	Batboa, C. Z.	Cristobal, C. Z.	Cruiser			
Santa Elisa.	17	15	07	18	6	22	18	13	30	18	21	25	American.	Grace Line.	390	3	51	7	25	0	Valparaiso, Chile.	New York, N. Y.	General	3,694	5,957	4,325
Julia																										
Lukenbach.	18	3	00	18	7	10	18	14	40	18	14	40	American.	Lukenbach Line.	436	6	57	2	27	0	Portland, Ore.	Mobile, Ala.	General.	6,574	8,543	6,402
Elizabeth.																										
Kellogg s.	18	13	20	18	14	17	18	22	00	18	22	00	American.	Kellogg S. S. Co.	391	9	51	2	25	0	Manila, P. I.	New York, N. Y.	Coco oil.	6,550	5,410	3,627

¹ Tanker.

² Towing barge.

³ Motor barge.

⁴ Motor boat.

⁵ Motor schooner.

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MOVEMENTS OF OCEAN VESSELS.—Continued.

PORT OF CRISTOBAL.—Continued.					* DEPARTURES.			
* ARRIVALS.								
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—	
April 17.....	Annetta I. ²¹	P. W. Hamilton.....	Colon, Rep. of Panama.	April 17.....	Carmelita ²⁰	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.	
April 17.....	Anachucuma ²¹	United Fruit Co.....	Colon, Rep. of Panama.	April 17.....	Bolivar.....	Columbian S. S. Line.....	New York via Kingston.	
April 18.....	Orinoco.....	Hamburg-American Line.....	Port Limon, Costa Rica.	April 17.....	Calamares.....	United Fruit Co.....	New York via waypoints.	
April 18.....	Pearl Marie ²⁰	G. I. Bryan.....	Colon, Rep. of Panama.	April 18.....	Concetta.....	Standard Fruit & S. S. Co.....	New Orleans and way pts.	
April 18.....	No. 309-N ²²	Pan American Airways.....	Curacao via waypoints.	April 18.....	Annetta I. ²¹	P. W. Hamilton.....	Colon, Rep. of Panama.	
April 18.....	No. 668-M ²²	Pan American Airways.....	Miami via waypoints.	April 18.....	Anachucuma ²¹	United Fruit Co.....	Colon, Rep. of Panama.	
April 18.....	No. 6064 ²²	Pan American Airways.....	San Salvador and way pts.	April 18.....	Pearl Marie ²⁰	G. I. Bryan.....	Bluefields, Nicaragua.	
April 18.....	No. 144-M ²²	Pan American-Grace Airways.....	Panama via waypoints.					
April 18.....	Chilean Airplane No. 1.....	Chilean Government.....	Miami via waypoints.					
²⁰ Motor schooner.			²² Air mail carrier.	PORT OF BALBOA.				
				April 14.....	All America.....	All America Cables, Inc.....	Callao, Peru.	
April 17.....	Heiyo Maru ²³	Nippon Yusen Kaisha.....	Hongkong, China.	April 17.....	Heiyo Maru ²³	Nippon Yusen Kaisha.....	Valparaiso, Chile.	
April 13.....	Real ²⁴	Hans Elliot.....	Panama Bay, R. P.	April 13.....	Real ²⁴	Hans Elliot.....	Panama Bay, R. P.	
April 17.....	Real ²⁴	Hans Elliot.....	Panama Bay, R. P.	April 17.....	Real ²⁴	Hans Elliot.....	Panama Bay, R. P.	
April 17.....	Nueva Panama ²³	Hans Elliot.....	Panama Bay, R. P.	April 17.....	Nueva Panama ²³	Hans Elliot.....	Panama Bay, R. P.	
April 17.....	Sambu ²⁴	Hans Elliot.....	Panama Bay, R. P.	April 17.....	Sambu ²⁴	Hans Elliot.....	Panama Bay, R. P.	
April 17.....	Dos Hermanos ²⁴	A. Valdez.....	Panama Bay, R. P.	April 17.....	Dos Hermanos ²⁴	A. Valdez.....	Panama Bay, R. P.	
April 17.....	A. B. De Obarrio ²⁴	A. Valdez.....	Panama Bay, R. P.	April 17.....	A. B. De Obarrio ²⁴	A. Valdez.....	Panama Bay, R. P.	

* Other than ships passing through the Canal.

²³ Motor ship. ²⁴ Motor schooner.

Swayne & Hoyt, Inc., Renames Recently Acquired Vessels.

According to a circular issued by the United States Shipping Board under date of April 8, 1931, Swayne & Hoyt, Inc., of San Francisco, have been authorized to change the names of five ships recently purchased from the Finkbine-Guild Transportation Company, to conform with the "Point" prefix of the other units of the Swayne & Hoyt fleet. The ships were formerly owned by the Shipping Board. The ships and their new names are as follows: The *Abron* to be *Point Chico*; the *Dio* to be *Point Caleta*; the *Dochet* to be *Point Salinas*; the *Manhattan Island* to be *Point Brava*; and the *Sabotawan* to be *Point Palmas*.

These vessels were operated until recently by the Redwood Line in the Gulf-North Pacific coast trade, and are now operating over the same route under the management of Swayne & Hoyt, Inc.

Privately Owned Small Craft Not to Transport Cargo or Passengers from Ships.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., April 18, 1931.

To all concerned:

It has come to the attention of the Marine Superintendent that owners of small craft have been using same for the transportation of cargo and/or passengers to and from ships in the Harbor (both terminals).

Such use of privately owned equipment is contrary to the policy of The Panama Canal and will not be permitted except when Panama Canal or Panama Railroad equipment, which is maintained for the purpose, is not available, and in no case without permission of the Marine Superintendent.

C. H. WOODWARD,
Marine Superintendent.

APPROVED:

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending April 18, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Galicia.....	Hamburg-American Line.....	April 5.....	April 5.....	.....	330
San Francisco.....	Hamburg-American Line.....	April 5.....	April 5.....	.....	168
Santa Rita.....	Grace Line.....	April 5.....	April 5.....	.....	304
Cali.....	Roland Line.....	April 5.....	April 5.....	.....	127
Reliance.....	Hamburg-American Line.....	April 5.....	April 5.....	.....	2
Pastores.....	United Fruit Co.....	April 5.....	April 5.....	14	164
Costa Rica.....	Royal Netherlands S. S. Co.....	April 5.....	April 6.....	13	5
City of Panama.....	Panama Mail S. S. Co.....	April 5.....	April 7.....	1,139	(²)
Suriname.....	United Fruit Co.....	April 5.....	April 9.....	736	(²)
Ludwigshafen.....	North German Lloyd.....	April 6.....	April 6.....	120	11
Carrillo.....	United Fruit Co.....	April 6.....	April 6.....	421	82
Tillie Lykes.....	Lykes Brothers.....	April 6.....	April 6.....	108	12
Wananta.....	Standard Fruit & S. S. Co.....	April 6.....	April 7.....	259	(²)
Siam.....	Danish East Asiatic Co.....	April 6.....	April 7.....	37	349
Haarlem.....	Royal Netherlands S. S. Co.....	April 6.....	April 7.....	289	189
Port Victor.....	Commonwealth & Dominion Line.....	April 7.....	April 7.....	54	(²)
Colombia.....	Panama Mail S. S. Co.....	April 7.....	April 8.....	230	750
Benjamin Franklin.....	Fred Olsen Line.....	April 7.....	April 8.....	328	16
Drechtidijk.....	Holland-America Line.....	April 7.....	April 8.....	224	377
Grunewald.....	Hamburg-American Line.....	April 8.....	April 8.....	40	23
San Vicente.....	Quaker Line.....	April 8.....	April 9.....	60	(²)
Sixaola.....	United Fruit Co.....	April 8.....	April 9.....	256	224
Cristobal.....	Panama R. R. S. S. Line.....	April 8.....	April 8.....	3,404	.....
Tela.....	United Fruit Co.....	April 8.....	April 9.....	714	31
Salvador.....	Pacific Steam Navigation Co.....	April 8.....	April 8.....	334	.....
Cerigo.....	Hamburg-American Line.....	April 8.....	April 8.....	803	.....
Venezuela.....	Panama Mail S. S. Co.....	April 9.....	April 10.....	643	61
Martinique.....	Colombian S. S. Line.....	April 9.....	April 10.....	33	296
Portland.....	Hamburg-American Line.....	April 9.....	April 10.....	19	245
Baralt.....	Royal Netherlands S. S. Co.....	April 9.....	April 9.....	544	.....
Pacific Pioneer.....	Furness, Withy & Co.....	April 9.....	April 10.....	(²)	233

¹ No cargo discharged.

² No cargo laded.

³ One case.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Ulua.	United Fruit Co.	April 10	April 10.	<i>Tons.</i> 269	<i>Tons.</i> 97
Lochmonar.	Royal Mail Steam Packet Co.	April 10.	April 10.	1	208
Teno.	Chilean S. S. Line.	April 10.	April 10.	(¹)	15
Oroya.	Pacific Steam Navigation Co.	April 10.	April 11.	20	(²)
Ariguani.	Elders & Fyffes, Ltd.	April 10.	April 11.	3	(²)
Takai Maru.	Osaka Shosen Kaisha.	April 10.	April 11.	188	26
Spreewald.	Hamburg-American Line.	April 10.	April 11.	46	18
Cefalu.	Standard Fruit & S. S. Co.	April 10.	April 11.	213	509
Costa Rica.	Royal Netherlands S. S. Co.	April 10.	April 11.	35	
Cauca.	National Navigation Co.	April 10.	April 11.	245	185
Convallaria.	Aluminium Line.	April 10.	April 11.	250	(²)
Santa Teresa.	Grace Line.	April 10.	April 11.	83	173
Tela.	United Fruit Co.	April 11.	April 11.	141	162
Suriname.	United Fruit Co.	April 11.	April 11.	7	267
Corinto.	Panama Mail S. S. Co.	April 11.		572	
City of Panama.	Panama Mail S. S. Co.	April 11.		105	
Cristobal.	Panama R. R. S. S. Line.		April 12.		654
Cerigo.	Hamburg-American Line.		April 12.		265
Baralt.	Royal Netherlands S. S. Co.		April 12.		143
Costarica.	Royal Netherlands S. S. Co.		April 12.		1,269
Barneveld.	Royal Netherlands S. S. Co.	April 12.	April 13.	214	89
Este.	North German Lloyd.	April 12.	April 13.	50	375
Arana.	Pacific Steam Navigation Co.	April 12.	April 13.	13	(²)
Manizales.	North German Lloyd.	April 12.	April 18.	579	178
City of Panama.	Panama Mail S. S. Co.		April 13.		100
Delftdijk.	Holland-America Line.	April 13.	April 13.	4	138
Emil Kirdorf.	Hamburg-American Line.	April 13.	April 13.	39	103
Wisconsin.	French Line.	April 13.	April 14.	157	183
Santa Barbara.	Grace Line.	April 13.	April 14.	201	129
Nosa King.	N. O. & S. A. S. S. Co.	April 13.	April 14.	203	124
Cuba.	French Line.	April 13.	April 15.	134	178
La Perla.	United Fruit Co.	April 13.	April 15.	786	(²)
Orinoco.	Hamburg-American Line.	April 14.	April 15.	155	40
Buenos Aires.	Johnson Line.	April 14.	April 15.	162	141
Camden.	United Fruit Co.	April 14.	April 15.	7,075	(²)
Salvador.	Pacific Steam Navigation Co.		April 15.		1,070
Sixaola.	United Fruit Co.	April 15.	April 15.	109	446
Aconecagua.	Chilean S. S. Line.	April 15.	April 15.	33	34
Zacapa.	United Fruit Co.	April 15.	April 16.	668	235
Iriona.	United Fruit Co.	April 15.	April 16.	787	19
Magallanes.	Spanish S. S. Line.	April 15.	April 16.	159	
Dorellian.	Leyland S. S. Line.	April 16.	April 16.	401	(²)
Loriga.	Pacific Steam Navigation Co.	April 16.	April 16.	30	160
Santa Maria.	Grace Line.	April 16.	April 16.	207	34
Bolivar.	Colombian S. S. Line.	April 16.	April 17.	36	220
Durazzo.	Hamburg-American Line.	April 16.		394	
Baarn.	Royal Netherlands S. S. Co.	April 16.	April 17.	39	172
Zenon.	French Line.	April 16.	April 17.	101	208
Calamares.	United Fruit Co.	April 17.	April 17.	261	107
Contessa.	Standard Fruit & S. S. Co.	April 17.	April 18.	264	633
Santa Elisa.	Grace Line.	April 17.	April 18.	225	(²)
Orinoco.	Hamburg-American Line.	April 18.		34	
Pearl Marie.	R. Feuillebois.	April 18.	April 18.	(¹)	18½

¹ No cargo discharged.² No cargo laded.

Official Circular.

Vehicle Traffic Regulations—One-way Street.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., April 15, 1931.

CIRCULAR No. 717-19.—Corrected.

1. That portion of San Pablo Street from entrance to garage at 787-X north to Balboa Road is hereby designated as a one-way street for north-bound traffic.

2. Section 4 of Circular No. 717-3, dated May 18, 1921, is amended accordingly.

H. BURGESS,
Governor.

Cable Address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

Hours of Departure of Passenger Trains.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m., 12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mails for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., April 29, 1931. No. 39.

CANAL WORK IN MARCH, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of March, 1931.

BALBOA HEIGHTS, C. Z., April 21, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of March, 1931:

TRANSITS AND TOLLS.

During the month, 439 commercial vessels and 12 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 102 vessels belonging to the United States Government, 1 transit of a Panamanian Government vessel, and 3 transits of vessels solely for repairs, on which no tolls were collected, making a total of 557 transits for the month, or a daily average of all traffic of 17.97. The majority of the United States Government vessels were units of the Atlantic Fleet transiting from the Pacific to the Atlantic following the combined fleet concentration in the Gulf of Panama for maneuvers.

Tolls on the 439 commercial vessels amounted to \$1,964,434.22, and on the launches to \$45.33, a total of \$1,964,479.55, or a daily average on all traffic of \$63,370.31.

In comparison with March, 1930, commercial traffic for the past month declined 14.8 per cent in transits and 13.1 per cent in tolls assessed. In comparison with February, 1931, the past month's traffic showed a slight increase—1.8 per cent in transits and 2.5 per cent in tolls—although the daily average of both these features were lower in March than in February.

A review of traffic for the first 9 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.4 per cent in transits, 6.5 per cent in Panama Canal net tonnage, 8.2 per cent in tolls collected, and 16.3 per cent in cargo passing through.

The total number of craft of all kinds transiting the Canal during the month of March in the two preceding years and in 1931 are shown in the following tabulation:

	March, 1929.	March, 1930.	March, 1931.
Commercial vessels.....	536	515	439
Launches (under 20 tons).....	15	7	12
Noncommercial vessels:			
United States Government.....	96	47	102
Panamanian Government.....	1	1	1
For repairs.....	3		3
Total.....	651	570	557

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North- bound.	South- bound.	Total.
Gatun.....	8	6	14
Pedro Miguel.....	14	18	32
Miraflores.....	15	18	33
Total.....	37	42	79

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931, to the end of March, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December...	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February....	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
Total..	4,739	4,248	22,724,648	21,255,836	23,164,653	19,387,255	20,580,233.88	18,886,246.53

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for March in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	March, 1929.	March, 1930.	March, 1931.	Average per month for calendar year 1930.
Number of vessels.....	536	515	439	490
Panama Canal net tonnage.....	2,567,961	2,505,859	2,211,934	2,438,406
United States net tonnage.....	1,965,046	1,876,772	1,630,412	1,826,376
Registered gross tonnage.....	3,230,243	3,103,558	2,709,548	3,025,071
Registered net tonnage.....	1,976,904	1,888,586	1,640,107	1,839,006
Tolls.....	\$2,343,865.55	\$2,260,002.36	\$1,964,434.22	\$2,178,835.41
Tons of cargo carried.....	2,743,768	2,558,238	1,915,507	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	March, 1929.	March, 1930.	March, 1931.	
Number of transits.....	17.29	16.61	14.16	16.12
Panama Canal net tonnage.....	82,837	80,834	71,353	80,167
Tolls.....	\$75,608.57	\$72,903.30	\$63,368.85	\$71,632.95
Tons of cargo carried.....	88,508	82,524	61,791	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of March in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	March, 1929.	March, 1930.	March, 1931.
Panama Canal net tonnage.....	4,791	4,866	5,039
United States net tonnage.....	3,666	3,644	3,714
Registered gross tonnage.....	6,026	6,026	6,172
Registered net tonnage.....	3,688	3,667	3,736
Tolls.....	\$4,372.88	\$4,388.35	\$4,474.79
Tons of cargo (including vessels in ballast).....	5,119	4,967	4,363
Tons of cargo (laden vessels only).....	5,991	5,672	5,135

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in March, 1931. Vessels of the United States registry, with 197, led in the number of transits, while those flying the British flag, with 103, were second. Vessels

of these two nationalities made up 68.3 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 33 and 29 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of March, 1931, aggregating 1,915,507 tons, was the lowest month's cargo tonnage through the Canal since September, 1925, when 1,891,988 tons were passed through. Cargo from the Atlantic to the Pacific totaled 499,617 tons, as compared with 465,126 tons in the previous month, and 741,986 tons in March, 1930. From the Pacific to the Atlantic there were 1,415,890 tons, as compared with 1,465,093 tons in February, 1931, and 1,816,252 tons in March, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 159,419 tons, constituted the heaviest item of cargo, followed by cotton with 29,055 tons, mineral oils with 26,614 tons, phosphates with 18,302 tons, sulphur with 15,883 tons, and cement with 13,379 tons. There was a decrease of 242,369 tons, or 32.7 per cent, in cargo moving in this direction as compared with March, 1930.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity, totaling in March, 1931, 285,509 tons. This was followed by lumber with 207,106 tons, sugar with 117,721 tons, wheat with 110,742 tons, nitrates with 104,468 tons, and ores (principally iron) with 93,834 tons. All these items decreased in comparison with March, 1930, as follows: Mineral oils, 134,531 tons, or 32.0 per cent; lumber, 93,409 tons, or 31.1 per cent; sugar, 595 tons; wheat, 39,292 tons, or 26.2 per cent; nitrates, 43,294 tons, or 29.3 per cent; and ores, 136,612 tons, or 59.3 per cent. In aggregate, there was a decrease of 400,362 tons, or 22.0 per cent, in cargo routed in this direction in comparison with March, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.907 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.728 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of March, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$10,238.99	\$10,819.20	\$580.21	
British.....	524,722.78	569,051.20	44,328.42	
Chilean.....	29,856.25	31,899.00	2,042.75	
Colombian.....	1,539.40	1,301.00		\$238.40
Danish.....	24,869.74	27,553.20	2,683.46	
Danzig.....	17,758.94	17,691.20		67.74
Dutch.....	30,212.50	38,353.00	8,140.50	
French.....	49,818.22	55,629.60	5,811.38	
German.....	102,839.51	115,542.80	12,703.29	
Italian.....	33,351.25	37,921.00	4,569.75	
Japanese.....	96,880.64	91,165.20		5,715.44
Norwegian.....	103,280.16	118,936.00	15,655.84	
Swedish.....	31,093.99	34,023.20	2,929.21	
United States.....	907,971.85	952,833.60	44,861.75	
Total.....	1,964,434.22	2,102,719.20	144,306.56	6,021.58
Net increase on all traffic.....			138,284.98	

* Includes \$14,000 collected for transit of naval vessel.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States interoceanic trade.....	\$28,250.66
United States foreign trade.....	18,126.45
United States-Canal Zone trade.....	* 1,515.36
Total.....	44,861.75

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in March, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.48	1.48
British.....	.51	1.05	.82
Chilean.....	.28	1.34	1.06
Colombian.....	.76	1.25	1.03
Danish.....	.69	1.38	.88
Danzig.....		1.76	1.76
Dutch.....	.37	1.25	.99
French.....	.41	1.37	.99
German.....	.47	1.32	.95
Italian.....	.18	1.26	.65
Japanese.....	.90	1.35	1.11
Norwegian.....	.63	1.51	1.21
Swedish.....	.94	2.86	2.24
United States.....	.69	1.33	1.05
Averages, March, 1931.....	.62	1.30	1.01
Averages, March, 1930.....	.81	1.39	1.15
Averages, March, 1929.....	.93	1.48	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of March is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	1,934	\$2,011.25	28	160,536	\$162,362.50
Ballast.....	34	191,486	142,351.55	2	7,984	5,748.48
General cargo ships:						
Laden.....	160	797,023	706,762.60	182	932,220	842,232.00
Ballast.....	26	119,373	87,960.39			
Noncargo-carrying ships:						
Naval.....	1		14,000.00			
Yachts.....	1	281	204.00	4	1,097	801.45
Total.....	223	1,110,097	953,289.79	216	1,101,837	1,011,144.43
Method of propulsion:						
Steam.....	156	759,889	675,518.12	155	805,462	749,330.60
Motor.....	67	350,208	277,771.67	56	293,632	259,037.18
Motor auxiliary.....				4	1,097	801.45
Sail.....				1	1,646	1,975.20
Total.....	223	1,110,097	953,289.79	216	1,101,837	1,011,144.43

Of the 311 steam-driven vessels, 230 were oil burning, 75 coal burning, and 6 either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of March, 1931. If tolls had been

assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Aircraft carriers.....				3	78,700	\$39,350.00
Aircraft tenders.....				1	3,943	4,928.75
Auxiliaries.....				1	2,809	3,511.25
Battleships.....				3	92,000	46,000.00
Cruisers.....	1	10,000	\$5,000.00	13	107,500	53,750.00
Destroyers.....				29	37,175	18,587.50
Destroyer tenders.....				2	13,448	16,810.00
Gunboats.....	2	3,000	1,500.00	2	3,150	1,575.00
Launches.....	3	30	22.50			
Mine sweepers.....	2	1,900	950.00	7	6,650	3,325.00
Patrol ships.....				2	1,000	500.00
Repair ships.....				1	3,771	4,525.20
Submarines.....	1	876	438.00	8	8,251	4,125.50
Submarine tenders.....	1	345	431.25	1	1,315	1,578.00
Supply ships.....	1	3,394	4,242.50	1	6,357	7,946.25
Tankers.....	3	17,579	21,973.75	2	11,126	13,907.50
Transports.....	1	3,992	4,990.00			
Tugs.....	2	2,000	1,000.00	3	2,969	1,484.50
U. S. Army vessels:						
Mine planters.....	1	1,208	604.00	1	1,208	604.00
Transports.....	1	3,908	4,885.00	3	11,724	14,655.00
Total, U. S. Government.....	19		46,037.00	83		237,163.45
Panamanian Government vessels:						
Transports.....	1	101	72.72			
Vessels for repairs:						
General cargo.....				1	5,042	3,630.24
Tankers.....	1	121	90.75			
Yachts.....				1	281	210.75
Grand total.....	21		46,200.47	85		241,004.44

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of March, 1931, carried cargo as follows: Atlantic to Pacific, 13,121 tons; Pacific to Atlantic, 736 tons; total, 13,857 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of March, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	10	39	\$33.75
Pacific to Atlantic.....	2	16	11.58
Totals.....	12	55	45.33

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of March, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	69,369	8,568	77,937
Local cargo shipped..... tons..	6,990	548	7,538
Transit cargo arriving..... tons..	1,959,599	1,925,110	3,884,709
Transit cargo clearing..... tons..	1,957,189	1,915,506	3,872,695
Cargo received for transshipment..... tons..	31,002	449	31,451
Cargo transhipped..... tons..	28,977	280	29,257

	Cristobal.	Balboa.	Total.
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	104	48	152
Number of releases issued.....	796	449	1,245
Tons received.....	6,627	4,327	10,954
Tons withdrawn.....	7,693	4,352	12,045
Packages received.....	1,370	371	1,741
Packages withdrawn.....	1,503	384	1,887
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	28		28
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	12,424		12,425
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	104	7	111
U. S. Army, including vessels..... tons..	235		239
Individuals and companies..... tons..	59		59
Transferred to Navy..... tons..	10,007		10,007
Total sales and issues..... tons..	22,829	7	22,836
Coal on hand, March 1, 1931..... tons..	43,472		43,472
Coal on hand, April 1, 1931..... tons..	39,577		39,577
Coal received during month..... tons..	18,934		18,934
Coal received from Navy..... tons..		7	7
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	9,125.60	19,613.04	28,738.64
Panama Railroad Company..... bbls..	964.30	735.00	1,699.30
U. S. Army and Navy..... bbls..		313.67	313.67
Total sales and issues..... bbls..	10,089.90	20,661.71	30,751.61
Fuel oil on hand, April 1, 1931..... bbls..	65,303.91	43,276.62	108,580.53
Fuel oil loaned to 15th Naval District..... bbls..	7,486.60		7,486.60
Diesel oil borrowed from Union Oil Company..... bbls..	189.00		189.00
Diesel oil issued during March, 1931..... bbls..	189.00	2,549.25	2,738.25
Diesel oil on hand, April 1, 1931..... bbls..	1,083.28	32,650.13	33,733.41
Miscellaneous transfers..... bbls..	512.73	592.18	1,104.91
Gasoline and kerosene pumped for The Panama Canal..... bbls..	2,839.57	5,928.61	8,768.18
Gasoline pumped for individuals and companies..... bbls..	694.21	8,211.65	8,905.86
Oil pumped for individuals and companies:			
Receipts..... bbls..	175,940.16	321,534.51	497,474.67
Issues..... bbls..	226,506.84	253,201.98	479,708.82
Oil pumped for U. S. Navy..... bbls..	36,833.78	110,650.00	147,483.78
Total fuel oil, gasoline, and kerosene handled..... bbls..	453,606.19	723,329.89	1,176,936.08
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	15	2	17
Measured for Panama Canal net tonnage.....	4		4
Remeasured for Panama Canal net tonnage.....	13	1	14
Panama Canal net tonnage corrected.....	2	3	5
U. S. equivalent tonnage corrected.....	8	2	10
Services of harbor equipment:			
Tugs, total operating hours.....	370 $\frac{1}{2}$	339 $\frac{1}{2}$	709 $\frac{1}{2}$
Launches, total operating hours.....	1,312 $\frac{1}{2}$	1,824 $\frac{1}{2}$	3,137
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$12,537.50	\$11,261.25	\$23,798.75
Pilotage.....	19,320.00	11,015.00	30,335.00
Seamen.....	10,408.00	10,096.00	20,504.00
Launch service.....	1,895.50	3,346.00	5,241.50
Wharfage.....	16,841.63	6,420.81	23,262.44
Ships measured.....	110.00		110.00
Miscellaneous.....	406.58	652.50	1,059.08
Ships repaired at Panama Canal shops:			
Commercial.....	27	7	34
U. S. Army and Navy.....	7	6	13
Panama Canal equipment.....	4	9	13
Total.....	38	22	60
Vessels dry-docked:			
Commercial.....	6	3	9
U. S. Army and Navy.....	4	4	8
Panama Canal equipment.....		5	5
Total.....	10	12	22
Clearances issued.....	270	233	503
Bills of health issued.....	323	300	623

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	571	3,721,200	2,429,323	471	2,895,775	1,780,558
Vessels entering port but not transiting Canal.	70	481,147	282,452	8	35,205	23,075
Vessels transiting Canal and handling passengers and cargo at terminal ports.	131	862,218	514,358	105	648,036	386,054
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	575	3,722,659	2,432,073	593	3,651,414	2,536,073
Vessels clearing port but not transiting Canal.	73	492,276	291,473	65	397,015	382,679
Vessels transiting Canal and handling passengers and cargo at terminal ports.	131	868,171	517,890	106	654,490	389,201

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
<i>Disembarking:</i>						
From Atlantic ports.	1,012	865	1,877	97	157	254
From Pacific ports.	275	133	408	284	239	523
Total disembarking.	1,287	998	2,285	381	396	777
<i>Embarking:</i>						
For Atlantic ports.	1,041	923	1,964	243	579	822
For Pacific ports.	162	113	275	273	318	591
Total embarking.	1,203	1,036	2,239	516	897	1,413
<i>Remaining on board:</i>						
From Atlantic to Pacific ports.	1,210	1,679	2,889	1,352	1,767	3,119
From Pacific to Atlantic ports.	1,953	2,293	4,246	2,010	1,904	3,914
From Atlantic to Atlantic ports.	3,964	135	4,099			
From Pacific to Pacific ports.				10	34	44
Total remaining on board.	7,127	4,107	11,234	3,372	3,705	7,077
Total arriving.	8,414	5,105	13,519	3,753	4,101	7,854
Total departing.	8,330	5,143	13,473	3,888	4,602	8,490

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.	223	53	23.8
Pacific to Atlantic.	216	75	34.7
Total.	439	128	29.2

In addition to the aforesaid, 62 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 193 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of March, 1931, 40 commercial airplanes entered and cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of March, 1931, together with the total sales in the corresponding month in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
<i>Sales at Cristobal to:</i>						
Commercial vessels.	\$1,812.30	\$9,044.17	\$19,677.05	\$78.02	\$6,605.10	\$37,216.64
Government vessels.	718.80	3,595.73	17,219.09	40.16	2,942.24	24,516.02
P. R. R. vessels.	2.40	261.69	116.85	563.79	33.12	977.85
Total sales, March, 1931.	2,533.50	12,901.59	37,012.99	681.97	9,580.46	62,710.51
Total sales, March, 1930.	3,105.33	18,043.72	54,082.14	928.22	12,597.57	88,756.98
Total sales, March, 1929.	3,614.90	17,718.48	48,640.74	862.62	11,471.96	82,308.70

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Balboa to:						
Commercial vessels.....	297.21	1,235.36	9,450.66	881.90	9,602.58	21,467.71
Government vessels.....	3,138.40	13,249.94	81,183.47	2,277.76	24,904.44	124,754.01
Total sales, March, 1931....	3,435.61	14,485.30	90,634.13	3,159.66	34,507.02	146,221.72
Total sales, March, 1930....	1,173.98	11,366.74	28,746.90	1,646.35	8,281.41	51,215.38
Total sales, March, 1929....	3,759.63	21,403.75	56,252.67	1,110.91	9,884.59	92,411.55

The aggregate sales to Government vessels during the month was \$149,270.03; to Panama Railroad vessels, \$977.85; and to other commercial vessels, \$58,684.35; making the total sales to all vessels \$208,932.23. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of March, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹					
	North.	South.	Total.	North.	South.	Total.	Mar., 1929.	Mar., 1930.	Mar., 1931.
Gatun.....	205	212	417	47	10	57	539	511	474
Pedro Miguel.....	212	223	435	51	15	66	530	534	501
Miraflores.....	212	220	432	49	14	63	512	511	495
Number of vessels put through locks.									
Gatun.....	217	223	440	119	38	157	671	592	597
Pedro Miguel.....	216	226	442	105	45	150	713	607	592
Miraflores.....	216	226	442	106	45	151	714	610	593

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	116	104	104
Panama Canal equipment.....	14	32	33
Launches (under 20 tons).....	23	11	11
Panamanian Government vessels.....	1		
Vessels for repairs.....	3	3	3

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in March, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,792,210,000	1,142,160,000	1,140,510,000
Leakage.....	30,000,000	133,000,000	160,000,000
Maintenance.....			4,060,000
Total, March, 1931.....	1,822,210,000	1,275,160,000	1,304,570,000
Total, February, 1931.....	1,756,740,000	982,380,000	984,580,000
Total, March, 1930.....	1,363,910,000	1,231,310,000	1,325,480,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of March, 1931, are shown in comparative form in the following tabulation:

	March.		March—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	476	781	1,625	382	728
Maximum momentary discharge for the month.....	622	5,522	19,400		
Gatun Lake watershed, total yield.....	573	1,482	1,792	493	1,104
Gatun Lake watershed, net yield.....	—329	728	823	—402	133
Draft on Gatun Lake for lockages and power.....	2,416	2,195	2,740	2,148	2,198

¹ March 31, 1910. ² 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for March, 1931, was 781 c. f. s., which is 7 per cent above the 30-year average of 728 c. f. s. The maximum monthly mean discharge on record for March is 1,625 c. f. s. in 1910, and the minimum is 382 c. f. s. in 1912. A rise of 3.6 feet occurred on the 23d due to general rains over the Isthmus. The maximum momentary discharge for the month was 5,522 c. f. s. at elevation 95.24 feet on the 23d, and the minimum was 448 c. f. s. at elevation 91.55 feet on the 20th and 21st. The maximum momentary discharge on record for March is 19,400 c. f. s. at elevation 99.40 feet on March 31, 1910, and the minimum is 303 c. f. s. at elevation 91.21 feet on March 31, 1926.

Gatun Lake varied in elevation during March from a maximum of 84.69 feet on the 1st and 2d to a minimum of 83.73 feet on the 31st. The total yield on Gatun Lake watershed was 1,482 c. f. s., which is 34 per cent above the 18-year March average, and, incidentally, this is the first month in two years in which the total yield has been appreciably above the average. The maximum total yield on record for March is 1,792 c. f. s. in 1915, and the minimum is 493 c. f. s. in 1926.

Miraflores Lake varied in elevation between a maximum of 54.25 feet on the 23d, and a minimum of 53.00 feet on the 4th. The mean elevation for the month was 53.62 feet and at midnight on the 31st the lake elevation was 53.75 feet.

SEISMOLOGY.

Seven seismic disturbances were recorded during the month—on the 1st, 4th, 6th, 8th, 18th, and 31st. The disturbance on the 31st had its epicenter in Managua, Nicaragua. It was destructive, causing great loss of life and property in Managua, but it was not felt in the Canal Zone.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 3,914,400 kilowatt hours, and the computed water consumption was 2,943,945,662 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 2,405,700 kilowatt hours, and the fuel oil consumption was 4,750.45 barrels. This station continued to carry a 2-engine load of approximately 5,200 kilowatts for the purpose of water conservation until the 15th of the month at which time one engine was taken off the line and the other engine carried an approximate load of 2,600 kilowatts until the 24th, when the remaining engine was shut down.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 33 vessels during the month. There were 339 work orders issued during the month, as compared with 346 issued during the previous month.

MECHANICAL DIVISION.

During the month of March, 1931, miscellaneous repairs were made on 38 vessels at Cristobal and 22 at Balboa. Ten vessels were dry-docked at Cristobal, and 12 at Balboa. The U. S. S. *Rochester* was docked for general overhaul. Extensive repairs to hull of the M. S. *Yomachichi* were completed during the month. Work was completed on the annual overhaul of the Panama Canal tug *Gorgona*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 8,089 cubic yards of grading were completed, 3 culverts constructed, abutments of bridge at station 148 were completed, headwalls for 10 culverts were constructed, and 1,125 cubic yards of rock were crushed. On the Paraiso-Summit road cut-off, 10,580 square yards of 18-foot reinforced concrete road were constructed. In connection with the municipal improvements at the Naval Air Station, Coco Solo, 1,000 square yards of earth were graded, 150 cubic feet of excavation completed, and 1,010 square yards of 6-inch concrete pavement laid.

Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 840,709,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average movement of 1.2 feet toward the Canal between stations 1770-00 and 1792-00 W., and 1.6 feet southward between stations 1770-00 and 1776-00 W. A dredge worked $4\frac{1}{2}$ days on this slide removing 9,250 cubic yards. The reference points on this slide showed no movement. There were no other slides or any new bank breaks in the Cut during the month. There was no interference with shipping on account of slides during the month.

A suction dredge worked the entire month in area "Y" of the Folks River borrow pit, excavating a total of 161,000 cubic yards of sand, coral, and blue clay. This material was pumped to the Colon fill with the assistance of the relay pump barge through an average pipe-line length from the dredge to relay of 1,433 feet and from the relay to the dump of 4,356 feet, a total of 5,789 feet. The total amount of material removed from the pit to date is 623,800 cubic yards, of which 384,400 cubic yards remained in place, giving a run-off of 38.4 per cent. The area of the completed fill is 23.5 acres.

The total excavation during March, 1931, was 1,084,950 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gaillard Cut—			
Project No. 3.....	10,150	44,250	54,400
Project No. 5.....	10,200	40,900	51,100
Maintenance.....	43,400	10,800	54,200
West Culebra slide.....	1,850	7,400	9,250
Canal prism, Pacific entrance—			
Project No. 1.....	114,000		114,000
Maintenance.....	641,000		641,000
Plant excavation:			
Colon fill.....	161,000		161,000
Total.....	981,600	103,350	1,084,950

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred and eighty-six (1,386) single trips were made, and 193 Panama Canal, 1,336 U. S. Army, and 7,706 other vehicles, a total of 9,235, were ferried across the Canal.

MADDEN DAM PROJECT.

Preliminary designs from the Madden Dam, prepared by the United States Bureau of Reclamation in consultation with the Designing Engineer of The Panama Canal, were completed and a preliminary announcement was issued to contractors who may be interested in submitting bids. It is expected that detailed plans and specifications will be completed in time to permit advertising for bids about July 1, 1931.

On the Isthmus, construction of concrete footings for the Summit-Madden Dam electric transmission line progressed at the rate of one tower a day. Clearing of the right-of-way, and grading of roads and trails for use in delivering the steel for the towers to each particular site also progressed. Studies of water supply, sewer system, and garbage disposal for Madden Dam camp were continued; estimates of cost of Government inspection of camp buildings (in the event dam and power plant be built by contract), and of cost of camp for construction by force account (should that method be adopted) were in the course of preparation. Work of a miscellaneous nature, consisting of surveying, silt investigation, seepage investigation, gauging, geological investigation, clearing, etc., was continued during the month.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on March 31, 1931, was 24,118, composed of 8,142 Americans, 2,923 of whom are men, 2,445 women, and 2,774 children; 177 Europeans, 86 of whom were men, 31 women, and 60 children; and 15,799 West Indians, 4,387 of whom were men, 2,832 women, and 8,580 children. The total number of persons in quarters on March 31, 1930 was 22,552.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of March 18, 1931, with a comparison of the working force for the preceding month and for March, 1930:

	Total employees.		As of March 18, 1931.		
	March, 1930.	February, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	151	120	56	67	123
Electrical.....	376	401	169	233	402
Municipal Engineering.....	879	1,193	97	1,128	1,225
Lock Operation.....	981	1,858	348	1,577	1,925
Dredging.....	1,253	1,203	200	997	1,197
Madden Project.....	1,195	201	20	382	402
Mechanical.....	1,412	1,312	459	877	1,336
Marine.....	965	858	198	668	866
Fortifications.....	413	315	20	259	279
Total.....	7,625	7,461	1,567	6,188	7,755
Supply Department:					
Quartermaster.....	2,355	1,841	198	1,607	1,805
Commissary.....	1,558	1,622	235	1,485	1,720
Cattle Industry—Plantations.....	116	212	2	214	216
Hotel Tivoli.....	129	127	8	116	124
Hotel Washington.....	118	112	8	100	108
Transportation.....	333	325	80	242	322
Total.....	4,609	4,239	531	3,764	4,295
Accounting Department.....	211	209	205	6	211
Health Department.....	1,153	1,130	281	868	1,149
Executive Department.....	851	878	547	339	886
Total.....	2,215	2,217	1,033	1,213	2,246
Panama Railroad Company:					
Superintendent.....	365	311	45	256	301
Transportation.....	186	190	63	131	194
Receiving and Forwarding Agency.....	1,388	1,343	81	1,231	1,312
Coaling Stations.....	343	258	38	244	282
Total.....	2,282	2,102	227	1,862	2,089
Grand total, March, 1930.....	16,731				
Grand total, February, 1931.....		16,019			
Grand total, March, 1931.....			3,358	13,027	16,385

Additions to the gold force on the Isthmus in March were as follows: Employed in the United States, 1; reemployed in the United States, 1; employed on the Isthmus, 8; reemployed on the Isthmus, 1; total, 11. Separations from the gold force totaled 45, as follows: Resigned, 7; discharged, 34; retired, 3; died, 1. At the end of the month there were on file 800 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 172 deaths occurred during the month of March, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (total population, 143,636), which is equivalent to an annual death rate of 14.37 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 28; pneumonia (broncho and lobar), 20; organic diseases of the heart, 12; cancer (various organs), 10; and nephritis (acute and chronic), 10. There were 9 deaths from diarrhea and enteritis, 8 from apoplexy, 2 from leprosy, and 1 each from meningococcus meningitis, chicken pox, and tetanus. There were 30 deaths among nonresidents, which are not included in the above statistics.

There were 337 live births and 13 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 29.24. Deaths among children under 1 year of age numbered 26, giving an infant mortality rate based on the number of live births reported, of 77.15.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon during the month was 105, of whom 7 were employees (3 white and 4 colored), 16 were members of employees' families (2 white and 14 colored), 15 were Canal Zone agriculturists, 33 were other civilian nonemployees, and 34 were Army

and Navy personnel. Of the 23 employees and members of employees' families, 19 were probably infected outside our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was one death from malaria among residents—a child living in Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$230,279.69, of which \$211,544.15 was for the Department of Operation and Maintenance, and \$18,735.54 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$43,108.84.

FINANCIAL STATEMENT.

The following statement shows in condensed form the aggregate revenue and expenditures for the month of February, 1931, as compared with February, 1930, with the figures for the first 8 months of the current fiscal year as compared with the same period in the fiscal year, 1930.

It is impossible to submit figures for the month of March at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	February, 1930.	February, 1931.	To end of February.	
			Last year.	This year.
Tolls.....	\$2,131,391.37	\$1,915,915.86	\$18,320,164.72	\$16,920,963.10
Other receipts.....	336,534.82	370,663.02	2,885,781.08	2,793,718.35
Total transit revenues.....	2,467,926.19	2,286,578.88	21,205,945.80	19,714,681.45
Total transit expenses.....	1,081,237.90	1,268,672.75	8,772,752.26	9,343,116.38
Net transit revenues.....	1,386,688.29	1,017,906.13	12,433,193.54	10,371,565.07
Three per cent capital charge...	623,502.66	625,761.31	4,968,809.80	5,008,721.65
Transit surplus.....	763,185.63	392,144.82	7,464,383.74	5,362,843.42
Business revenues.....	1,948,250.19	1,370,458.99	13,202,533.50	12,013,953.88
Business expenses.....	1,855,610.31	1,299,927.56	12,475,766.84	11,457,943.09
Net business revenues.....	92,639.88	70,531.43	726,766.66	556,010.79
Three per cent capital charge.....	62,967.84	65,523.63	526,569.47	546,862.61
Business surplus.....	29,672.04	5,007.80	200,197.19	9,148.18
Combined revenues.....	4,105,700.39	3,318,320.39	31,768,729.46	29,166,663.69
Combined expenses.....	2,626,372.22	2,229,882.83	18,608,769.26	18,239,087.83
Net revenues.....	1,479,328.17	1,088,437.56	13,159,960.20	10,927,575.86
Three per cent capital charge.....	686,470.50	691,284.94	5,495,379.27	5,555,584.26
Combined surplus.....	792,857.67	397,152.62	7,664,580.93	5,371,991.60

Respectfully,

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 23, 1931.

No. 872.

Caribbean Sea, Jamaica, Portland Point, new lighthouse established. The American Consul at Kingston, Jamaica, reports the inauguration about May 1, 1931, of a new lighthouse at Portland Point, situated at the southernmost point of the island of Jamaica:

Latitude, 17° 44' 29" north; longitude, 77° 9' 58" west; color, white; characteristic, group flashing—2 flashes in quick succession every 15 seconds.

Visibility, 20 miles; elevation of focal plane above high water, 665 feet; height of tower, 132 feet.

Remarks: Unattended automatic acetylene light.

H. BURGESS,
Governor.

Improved Discharge Berth for Tank Ships at Balboa.

The old oil crib at Balboa for discharging tankers, designated as Dock No. 2, near buoy No. 17 in the Pacific sea level section of the Canal, was abandoned on August 15, 1930, and operations were transferred to Dock 4, opposite lighted beacon No. 19 $\frac{1}{2}$. The pipe lines connecting Dock 4 with the pumping plant of the tank farm have greater capacity than those which had been used for Dock 2. Comparison of the connections is as follows:

Service of pipe line.	Former Dock 2.		Present Dock 4.	
	No. of lines.	Diameter of lines.	No. of lines.	Diameter of lines.
		<i>Inches.</i>		<i>Inches.</i>
Fuel oil.....	2	10	2	12
Diesel oil.....	1	6	1	10
Gasoline.....	1	8	1	8
Kerosene.....	1	4	1	6

Experience since the change was made has shown that tankers can be discharged with appreciably greater rapidity from the new berth. Vessels can be bunkered there when desired, though most of the bunkering is done at the regular commercial docks.

Dock 4 is known among the older employees of the Canal as "the old French wharf." It was built in 1899 by the second French Canal company for the Panama Railroad Co., which previously had used the "American wharf" and "English wharf" in Panama City, handling cargo in lighters. The railroad company ceased to use the pier for cargo on August 10, 1916. Five hundred feet of the structure, comprised in the 5 southern bays, were demolished in 1927, and the superstructure was removed from the deck of the remaining 492.12 feet.

"Reina del Pacifico" Arrives at Canal on Maiden Voyage.

The new quadruple screw motor ship *Reina del Pacifico*, of the Pacific Steam Navigation Company arrived at Cristobal on April 25, 1931, on her maiden voyage in the company's service between Europe and the west coast of South America. She transited the Canal on the 26th and sailed the same day for Valparaiso, via intermediate ports. The new vessel has an over-all length of 574 $\frac{1}{6}$ feet, a beam of 76 feet, and is of 17,800 gross tons; she is the largest ship in the passenger trade along the west coast of South America. Designed to make a speed of 19 knots, the new vessel will make the voyage between Liverpool and Valparaiso in 27 days, as compared with 34 days required of the "O" boats of the company plying in this trade. Accommodations are provided for 880 first, second, and third-class passengers. The time from Valparaiso to Balboa will be 8 days, and from Cristobal to Liverpool, 17 days.

Other vessels of the Pacific Steam Navigation Company engaged in the trade between Europe and the west coast of South America are the *Orduna*, *Orbita*, *Oroya*, *Oropesa*, *Orcoma*, and *Orita*, all combination passenger and freight vessels.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, April 25, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.									
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Tons.	Gross.			Net.											
Corinto.	11	23	25	19	5	55	19	14	17	19	15	25	American.	Panama Mail S. S. Co.	261	0	40	0	13	6	Cristobal, C. Z.	Acapulco, Salvador.	Ballast.	2,352	5,549
Dakotan.	18	21	25	19	6	10	19	13	12	19	14	10	American.	Amer.-Hawaiian Line.	404	0	53	7	19	0	Portland, Oreg.	General.	2,917	7,156	5,094
Brand.	19	00	50	19	6	40	19	13	52	19	17	10	Norwegian.	J. J. Moore & Co.	380	5	54	0	14	0	Pto. Tarifa, Cuba.	Ballast.	6,864	5,131	
Hanley.	19	4	05	19	7	20	19	13	40	19	16	55	American.	Norton, Lilly & Co.	440	0	56	0	16	0	Seattle, Wash.	Ballast.	8,310	6,005	
Scota.	19	8	00	19	8	00	19	15	34	.....	.....	.....	American.	U. S. Navy.	149	3	30	0	.....	.....	Balboa, C. Z.	Towing barge.	.....	.....	.....
Pacific.	19	10	55	19	11	05	19	18	10	.....	.....	.....	American.	Dimon S. S. Corp.	399	0	54	7	20	0	Philadelphia, Pa.	General.	5,400	6,138	4,354
Cedar.	19	23	50	20	6	05	20	13	10	20	14	15	Danish.	Isbrandtsen Moller Co.	418	9	54	7	24	0	Cebu, P. I.	General.	7,285	7,385	5,500
Gerrude.	20	00	25	20	7	10	20	14	30	20	16	00	British.	Barber S. S. Line.	428	0	56	1	23	10	Philadelphia, Pa.	General.	4,690	7,596	5,159
Muncaster.	20	00	25	20	7	30	20	15	14	.....	.....	.....	American.	U. S. Navy.	231	0	21	10	.....	.....	Balboa, C. Z.	Ballast.	.....	.....	.....
Castle.	20	7	30	20	7	30	20	15	14	.....	.....	.....	American.	U. S. Navy.	231	0	21	10	.....	.....	Balboa, C. Z.	Ballast.	.....	.....	.....
S-11.	20	7	30	20	7	30	20	15	14	.....	.....	.....	American.	U. S. Navy.	231	0	21	10	.....	.....	Balboa, C. Z.	Ballast.	.....	.....	.....
S-13.	20	7	30	20	7	30	20	15	14	.....	.....	.....	American.	U. S. Navy.	231	0	21	10	.....	.....	Balboa, C. Z.	Ballast.	.....	.....	.....
Buffalo.	20	8	50	20	9	00	20	16	39	20	18	00	American.	Nelson Line.	324	0	46	2	19	0	Boston, Mass.	General.	2,797	3,985	2,630
Bridge.	20	8	50	20	9	00	20	16	39	20	18	00	American.	Nelson Line.	324	0	46	2	19	0	Boston, Mass.	General.	2,797	3,985	2,630
Adolf von.	20	4	20	20	11	40	20	18	56	20	20	00	German.	Hamburg-American Line.	409	10	53	0	19	1	Hamburg, Germany.	General.	2,361	7,173	5,504
Baeyer.	19	18	40	20	12	45	20	19	49	21	17	20	American.	Panama Mail S. S. Co.	380	6	48	7	21	0	New York, N. Y.	General.	2,140	5,926	4,178
Ecuador.	19	18	40	20	12	45	20	19	49	21	17	20	American.	Panama Mail S. S. Co.	380	6	48	7	21	0	New York, N. Y.	General.	2,140	5,926	4,178
Norfolk.	20	12	10	20	13	40	20	22	20	21	2	40	British.	Federal Steam Nav. Co.	520	0	64	2	18	0	London, England.	Ballast.	12,963	9,265	
Cauca.	19	23	28	21	6	04	21	14	38	21	17	55	Colombian.	National Navigation Co.	107	0	22	0	8	3	Cristobal, C. Z.	General.	70	262	161
Kinderdijk.	20	17	25	21	6	03	21	14	47	21	16	15	Dutch.	Holland-America Line.	469	4	58	4	19	1	Rotterdam, Holland.	General.	3,220	8,515	6,060
City of.	21	2	30	21	6	15	21	15	23	21	16	45	British.	Ellerman & Bucknall.	442	0	58	0	23	0	New York, N. Y.	General.	3,217	9,085	6,933
Tokio.	21	2	30	21	6	15	21	15	23	21	16	45	British.	Ellerman & Bucknall.	442	0	58	0	23	0	New York, N. Y.	General.	3,217	9,085	6,933
Isabank.	21	2	45	21	7	00	21	16	14	21	20	15	British.	Andrew Weir & Co.	426	0	57	0	18	0	Newport News, Va.	General.	2,358	7,623	5,336
Hakutsu.	21	6	15	21	7	35	21	16	43	21	17	45	Japanese.	Tatsumi Shokai.	451	0	55	0	27	9	Port Tampa, Fla.	(s)	8,182	7,064	5,175
Maru.	21	6	15	21	7	35	21	16	43	21	17	45	Japanese.	Tatsumi Shokai.	451	0	55	0	27	9	Port Tampa, Fla.	(s)	8,182	7,064	5,175
Guayaquil.	20	13	40	21	9	55	21	17	14	21	18	15	American.	Panama R. R. S. S. Line.	251	0	43	6	17	6	New York, N. Y.	General.	489	2,874	1,944
Dorothy.	21	12	20	21	12	30	21	19	30	23	1	25	American.	Arrow Line.	410	0	54	2	20	0	Baltimore, Md.	General.	3,800	6,579	4,810
Cahill.	21	12	25	21	13	00	21	20	43	21	22	20	American.	Argonaut S. S. Co.	440	0	56	0	22	0	Baltimore, Md.	Steel, general.	6,227	8,324	6,036
Pomona.	21	12	35	21	13	00	21	20	43	21	22	20	American.	Argonaut S. S. Co.	440	0	56	0	22	0	Baltimore, Md.	Steel, general.	6,227	8,324	6,036
San Roberto.	21	13	15	21	14	25	21	21	48	22	2	14	British.	Eagle Oil & Ship'g Co.	407	1	52	2	26	8	Curacao, D. W. I.	General.	7,584	6,239	4,350
Point Arena.	22	00	05	22	6	15	22	13	57	22	14	50	American.	Swayne & Hoyt.	324	0	46	2	22	10	New Orleans, La.	General.	3,817	4,983	2,612
Paul.	22	4	50	22	6	35	22	14	52	22	15	45	American.	Luckenbach Line.	471	1	59	2	18	6	Boston, Mass.	General.	4,176	9,027	6,539
Luckenbach.	22	4	50	22	6	35	22	14	52	22	15	45	American.	Luckenbach Line.	471	1	59	2	18	6	Boston, Mass.	General.	4,176	9,027	6,539
Nore.	22	6	25	22	7	35	22	15	45	22	16	35	Norwegian.	Anglo-Saxon Pet. Co.	460	5	59	5	21	3	Palmouth, England.	Ballast.	8,297	5,572	
Kansan.	22	8	45	22	9	00	22	16	36	22	17	35	American.	Amer.-Hawaiian Line.	404	6	54	0	18	0	Seattle, Wash.	General.	2,304	6,779	4,921
Heronspool.	22	7	30	22	9	55	22	17	04	.....	.....	.....	British.	Empire Shipping Co.	421	2	54	10	15	6	Tyne, England.	General.	.....	.....	.....
Skoteas.	22	6	45	22	11	10	22	18	15	22	19	20	Norwegian.	Anglo-Saxon Pet. Co.	449	0	59	2	22	9	Gothenburg, Swed.	Ballast.	.....	.....	.....
Skoteas.	22	6	45	22	11	10	22	18	15	22	19	20	Norwegian.	Anglo-Saxon Pet. Co.	449	0	59	2	22	9	Gothenburg, Swed.	Ballast.	.....	.....	.....
Tanker.	* Tanker.															* Kerosene, lubricating oil, and gasoline.									

* Kerosene, lubricating oil, and gasoline.

* Phosphates and cotton.

* Submarine.

* Tug.

* Motor ship.

* Tanker.

San Marcos	22	6.30	22	15.25	22	22.38	23	00.02	American	Quaker Line	410.0	54.0	21.6	New York, N. Y.	Seattle, Wash.	General	3,907	6,755	4,895
San Jose	20	18.35	23	10.20	23	17.32	23	18.45	American	United Fruit Co.	330.0	45.0	17.10	Cristobal, C. Z.	San Francisco, Cal.	General, coffee	370	3,675	2,359
Only 1	23	7.05	24	6.05	24	14.25	24	16.45	Italian	A. Scott	518.0	64.0	26.8	Genoa, Italy	Balboa, C. Z.	Ballast	1,724	12,553	3
Marore	23	8.05	24	6.25	24	14.37	24	16.15	American	Nav. Generale Italiana	520.3	72.2	23.10	Batavia, N. Y.	Valparaiso, Chile	General	15,551	7,516	3
Peru	23	22.30	24	7.15	24	14.34	24	16.45	Danish	Ore S. S. Corp.	425.0	55.2	24.6	Copenhagen, Den.	Crus Grande, Chile	Ballast	17,407	5,660	3
Franchise Robert	24	6.30	24	8.15	24	14.59	25	16.45	British	East Asiatic Co.	365.0	57.0	25.0	Halifax, N. S.	Los Angeles, Calif.	Passengers only	7,096	3,761	3
Raungtiki	24	7.05	24	8.25	24	16.05	24	22.08	British	Can. Nat. Steamships	531.0	70.2	25.2	London, England	Vancouver, B. C.	General	2,820	18,197	13,526
Indian City	24	00.45	24	8.35	24	16.38	24	17.35	Norwegian	N. Z. Shipping Co.	375.0	52.3	12.5	Rotterdam, Holland	Wellington, N. Z.	General	5,977	4,375	3
Hanger	24	2.35	24	9.35	24	17.16	24	18.20	British	Intercean S. S. Corp.	411.7	54.6	15.0	Rotterdam, Holland	Los Angeles, Calif.	Ballast	6,512	4,665	3
K. R. Kingsbury	24	4.30	24	9.35	24	17.50	24	18.47	American	Standard Oil Co.	440.0	58.2	12.0	Pall River, Mass.	Vancouver, B. C.	Ballast	9,033	5,938	3
Taranaki	24	6.15	24	10.50	24	18.17	25	3.25	British	Shaw, Savill & Albion	482.0	64.2	19.6	London, England	Los Angeles, Calif.	Ballast	11,706	8,320	3
Clyde Maru	24	9.45	24	10.55	24	18.50	24	19.55	Japanese	Kokusa Kisen Kaisha	423.0	53.0	24.6	New York, N. Y.	Ke, Chaulers, N. Z.	General	6,266	5,868	4,324
Dakland	24	6.10	24	12.05	24	19.18	24	20.40	German	Hamburg-American Line	436.0	59.0	20.10	Hamburg, Germany	Vancouver, B. C.	General, coffee	2,868	8,510	6,387
Ouroazo	16	19.40	24	13.20	24	21.08	24	22.30	German	Hamburg-American Line	423.0	54.0	13.0	Cristobal, C. Z.	Guayquil, Ecuador	General	289	1,633	1,041
Colonial	24	6.20	24	14.50	24	21.36	24	23.06	British	T. & J. Harison	396.5	52.6	22.3	Liverpool, England	Vancouver, B. C.	Ballast	5,753	3,893	3
Wyoming	24	3.00	24	14.17	24	21.55	24	23.06	French	French Line	470.0	66.0	22.3	Havre, France	Vancouver, B. C.	General	1,676	10,440	7,027
Syva	23	18.55	24	19.40	25	9.12	25	17.20	German	Hamburg-American Line	399.0	43.0	18.8	Hamburg, Germany	Champerco, Guat.	General	1,787	3,350	2,292
Caldas	23	3.00	25	5.55	25	14.25	25	17.20	Colombian	National Navigation Co	116.0	21.1	9.5	Perme, R. P.	Buenaventura, Col.	General	222	211	124
Robert E.	24	18.00	25	6.15	25	13.29	25	15.15	American	Tidewater Oil Co.	424.0	58.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	7,333	5,182	3
Hopkins	24	21.40	25	6.15	25	14.09	25	15.50	British	Reardon Smith Line	383.0	53.5	13.0	Glasgow, Scotland	Vancouver, B. C.	Ballast	5,913	4,377	3
Madras City	24	23.40	25	7.10	25	14.48	25	16.10	American	Munson S. S. Line	400.7	54.2	21.6	Baltimore, Md	Tacoma, Wash.	General	4,076	6,623	4,668
Munnysie	25	2.30	25	7.20	25	15.12	25	16.20	American	States S. S. Co.	409.8	54.2	17.0	Baltimore, Md	Seattle, Wash.	General	2,328	6,821	4,927
San Felipe	25	2.30	25	7.20	25	15.12	25	16.20	American	States S. S. Co.	409.8	54.2	17.0	Baltimore, Md	Seattle, Wash.	General	2,328	6,821	4,927
J. W. Van	25	2.40	25	8.30	25	16.07	25	17.20	American	James B. Berry Sons	364.9	51.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast	5,174	3,528	3
Dyke	25	6.10	25	8.40	25	16.58	26	15.55	American	Templeton Crocker	103.3	23.0	14.6	San Juan, P. R.	San Francisco, Cal.	Ballast	126	86	3
Zaca	25	3.20	25	8.35	25	17.07	25	18.09	American	Calmar Line	451.0	57.2	28.5	Baltimore, Md	Seattle, Wash.	Steel, general	10,579	7,949	4,900
Cubore	25	4.15	25	9.30	25	18.15	25	19.25	Japanese	Osaka Shosen Kaisha	407.0	51.0	25.9	New York, N. Y.	Osaica, Japan	Gen., phosphate	6,947	6,538	4,769
Havana Maru	25	4.15	25	9.30	25	18.15	25	19.25	Japanese	Osaka Shosen Kaisha	407.0	51.0	25.9	New York, N. Y.	Osaica, Japan	General	2,560	6,255	4,069
Santa Rita	24	14.15	25	9.55	25	17.23	26	1.07	American	Grace Line	370.0	53.0	22.0	New York, N. Y.	Valparaiso, Chile	Liquors	60	114	55
Andrey B.	24	6.40	25	10.10	25	18.10	26	19.25	British	Yarmouth Shipping Co.	379.5	20.6	8.0	St. Georges, Rerda	Eisenstadt, Mexico	General	1,049	6,295	4,663
Winton	25	8.45	25	10.40	25	18.35	26	6.02	British	Avenue Shipping Co.	373.2	33.6	16.6	New York, N. Y.	Sydney, Australia	General	1,049	6,295	4,663
Pacific Enterprize	24	12.15	25	12.15	25	19.44	25	20.45	British	Furness, Withy & Co.	436.0	60.0	19.4	Glasgow, Scotland	Vancouver, B. C.	General, bananas	1,242	9,641	6,989
Canadian	25	15.05	25	15.10	25	22.10	25	23.27	British	Can. Nat. Steamships	400.0	52.0	18.0	St. John, N. B.	Vancouver, B. C.	General	1,592	5,858	4,108
Plankton	25	18.30	25	18.45	26	9.53	26	11.28	Japanese	Tatsumi K. K. Kaisha	400.0	52.0	22.0	Tampa, Florida	Kobe, Japan	Phosphate	4,263	6,099	4,455
Miyadono Maru	25	18.30	25	18.45	26	9.53	26	11.28	Japanese	Tatsumi K. K. Kaisha	400.0	52.0	22.0	Tampa, Florida	Kobe, Japan	Phosphate	4,263	6,099	4,455

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Charles Nelson	17	9.30	19	6.15	19	14.00	19	14.00	American	Nelson Line	380.4	53.1	25.0	Seattle, Wash.	New York, N. Y.	Lumber, general	5,855	5,659	4,138
San Simeon	19	6.38	19	8.21	19	16.00	19	18.30	American	States S. S. Co.	419.5	54.3	25.0	Portland, Ore	Philadelphia, Pa.	Lumber, general	9,904	6,573	4,916
Solana	19	10.25	19	11.05	19	18.35	19	18.35	American	Tidewater Oil Co.	419.5	54.3	25.0	San Francisco, Cal	Wilmington, Del.	Gasoline	10,938	6,820	5,025
Comet	19	13.55	19	14.48	19	22.35	19	22.35	American	Standard Oil Co., N. Y.	480.5	66.0	23.0	Los Angeles, Calif	New York, N. Y.	Gasoline	10,938	6,820	5,025
Cauca	19	16.10	19	16.48	19	23.28	21	6.04	Colombian	National Nav. Co.	407.0	22.9	8.0	Buenaventura, Col	Cristobal, C. Z.	General	148	962	161
San Quintino	19	17.50	20	6.20	20	14.15	20	14.15	British	Eagle Oil & Ship. Co.	407.2	52.4	26.0	Wilmington, Calif	United Kingdom	Gasoline	6,077	6,156	4,212
George Washington	20	5.30	20	7.16	20	16.05	21	20.49	Norwegian	Fred Olsen & Co.	425.5	55.3	27.0	Vancouver, B. C.	Antwerp, Belgium	General	5,069	7,553	5,673

** Wheat, lumber, and general.

** Gasoline and lubricating oil.

** Motor ship.

** Tanker.

* Launch. * Yacht. * Motor schooner.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Rolling Stone ¹³	19	16.40	20	7.20	20	16.00	20	16.00	Panamanian	Robert Wilcox.	48.0	11.6		Balboa, C. Z.	Cristobal, C. Z.	Ballast.		27	20
San Jose.	20	11.00	20	11.29	20	18.35	20	18.35	American	United Fruit Co.	330.0	44.6	21.0	San Francisco, Cal.	Cristobal, C. Z.	General.	1,385	3,675	2,339
Los Angeles ¹⁴	20	11.00	20	11.48	20	19.30	20	23.05	German	Hamburg-American Line	432.5	59.2	26.0	Antwerp, Belgium	General.	General.	7,700	8,454	6,344
Commander ¹⁵	20	12.40	20	13.28	20	21.30	20	21.00	American	U. S. Navy.	407.4	52.2	26.0	Balboa, C. Z.	Darien, C. Z.	Ballast.	8,001	9,041	4,326
El Cervo ¹	20	2.09	21	6.14	21	14.05	21	14.05	British	Anglo-Econ. Oilfields.	340.0	46.2	23.3	La Libertad, Ecua.	Philadelphia, Pa.	Crude oil.	8,001	9,041	4,326
Nosa Queen.	20	2.09	21	6.14	21	14.05	21	14.05	American	N. O. & S. S. Co.	407.4	46.2	23.3	Valparaiso, Chile.	New Orleans, La.	(*)	4,570	3,986	2,600
Heinrich V.	21	5.00	21	6.51	21	15.25	21	15.25	Danish	W. Tankerschiff Rhederei.	520.0	70.0	30.0	Talara, Peru	Stettin, Germany.	(*)	15,248	12,535	8,224
Riedemann ¹⁴	21	2.00	21	7.20	21	17.05	22	19.15	French	French Line.	425.0	55.0	26.1	Talcahuano, Chile.	Havre, France.	General.	8,585	6,990	4,854
Alaska.	21	2.30	21	7.34	21	17.40	21	17.40	American	Munson, McCork & Line	370.0	53.1	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,574	5,525	4,187
Munrodes.	21	3.00	21	8.02	21	18.25	21	18.25	American	Amer-Hawaiian Line.	434.3	57.7	23.0	Portland, Ore.	Boston, Mass.	General.	6,838	7,983	5,916
Arizona.	21	3.00	21	8.02	21	18.25	21	18.25	American	Amer-Hawaiian Line.	434.3	57.7	23.0	Portland, Ore.	Boston, Mass.	General.	6,838	7,983	5,916
Lillian Luck-	21	7.55	21	8.45	21	18.55	21	18.55	American	Luckenbach Line.	448.9	60.2	29.0	Portland, Ore.	Boston, Mass.	Lumber, general.	6,700	9,294	6,865
enbach.	21	7.55	21	8.45	21	18.55	21	18.55	American	Luckenbach Line.	448.9	60.2	29.0	Portland, Ore.	Boston, Mass.	Lumber, general.	6,700	9,294	6,865
Berta ¹⁴	21	10.33	21	10.33	21	18.45	21	18.45	Panamanian	Jose M. Sosa.	74.5	19.6	6.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	2.576	98	49
Camdian/Leader	21	11.00	21	11.46	21	19.40	21	19.40	British	Can. Nat. Steamships	400.0	52.0	18.0	Melbourne, Aus'ia	Montreal, Canada.	General.	2,576	5,891	4,114
Pacific	21	13.05	21	13.46	21	21.00	21	22.55	British	Furness, Withy & Co.	435.9	60.2	27.3	Vancouver, B. C.	Manchester, Eng.	General.	8,600	9,644	6,967
Reliance ¹⁴	21	13.05	21	13.46	21	21.00	21	22.55	British	Furness, Withy & Co.	435.9	60.2	27.3	Vancouver, B. C.	Manchester, Eng.	General.	8,600	9,644	6,967
Canadian	21	17.30	22	8.13	22	15.50	22	18.45	British	Can. Nat. Steamships	400.0	52.4	15.0	Auckland, N. Z.	Montreal, Canada.	General.	1,350	6,192	4,402
Highlander	21	17.30	22	8.13	22	15.50	22	18.45	British	Can. Nat. Steamships	400.0	52.4	15.0	Auckland, N. Z.	Montreal, Canada.	General.	1,350	6,192	4,402
California	22	10.50	22	12.11	22	20.10	22	20.10	American	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif	London, England.	Gasoline.	15,365	11,719	8,619
Standard ¹⁴	22	10.50	22	12.11	22	20.10	22	20.10	American	Standard Oil Co., Calif.	513.5	68.2	30.0	Los Angeles, Calif	London, England.	Gasoline.	15,365	11,719	8,619
Canes ¹⁴	22	12.25	22	12.25	22	22.30	22	22.30	Columbian.	National Navigation Co.	107.0	22.9		Balboa, C. Z.	Cristobal, C. Z.	General.	70	262	161
Narragan-	21	22.00	22	14.17	22	22.10	22	22.10	British	Anglo-American Oil Co.	425.0	57.0	27.5	Los Angeles, Calif	Glasgow, Scotland	Gasoline.	9,112	7,020	5,051
sett ¹⁴	21	22.00	22	14.17	22	22.10	22	22.10	British	Anglo-American Oil Co.	425.0	57.0	27.5	Los Angeles, Calif	Glasgow, Scotland	Gasoline.	9,112	7,020	5,051
Guatemala.	22	8.00	23	6.57	23	13.27	24	9.00	American	Panama Mail S. S. Co.	360.2	51.6	21.5	San Francisco, Cal.	New York, N. Y.	General.	2,619	5,776	4,081
Utowana ¹⁴	22	8.00	23	6.57	23	13.27	24	9.00	American	Panama Mail S. S. Co.	360.2	51.6	21.5	San Francisco, Cal.	New York, N. Y.	General.	2,619	5,776	4,081
Acujata.	22	19.40	23	6.50	23	14.45	23	14.45	British	A. V. Armour	230.0	33.1	11.2	Mazatlan, Mexico	Cristobal, C. Z.	Ballast.	265	1,504	966
Tidewater ¹⁴	22	19.40	23	6.50	23	14.45	23	14.45	British	Pacific Steam Nav. Co.	215.7	33.6	13.0	Champerico, Guat.	Cristobal, C. Z.	General.	265	1,273	706
France Maru.	22	19.45	23	7.37	23	16.00	23	16.00	American	Tidewater Oil Co.	480.6	66.0	29.0	Los Angeles, Calif.	Baltimore, Md.	Gasoline.	13,270	9,734	6,349
Constance	22	19.45	23	7.37	23	16.00	23	16.00	Japanese	Warner Barnes & Co.	385.0	51.0	27.0	Iloilo, P. I.	East coast U. S. A.	Sugar.	7,800	6,209	4,658
Chandler.	23	3.30	23	8.46	23	16.45	23	16.45	American	Arrow Line.	400.6	54.2	26.0	Astoria, Wash.	New York, N. Y.	Lumber.	3,699	6,621	4,891
Tekoa.	23	3.30	23	8.46	23	16.45	23	16.45	American	Arrow Line.	400.6	54.2	26.0	Astoria, Wash.	New York, N. Y.	Lumber.	3,699	6,621	4,891
Point Bonita.	23	7.10	23	9.09	23	18.00	23	18.00	British	N. Z. Shipping Co.	409.6	62.8	23.4	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	5,580	10,570	7,521
Nordpol ¹⁴	23	8.05	23	9.09	23	18.00	23	18.00	American	Swayne & Hoyt.	324.0	46.2	21.0	Seattle, Wash.	New Orleans, La.	Lumber, general.	3,064	3,984	2,617
Cal.	23	11.05	23	12.08	23	19.30	23	19.30	Danish	Anglo-Chin. Nite Co.	330.8	53.9	26.0	Guayaquil, Chile.	Charleston, S. C.	Nitrates.	7,950	6,252	4,558
Prince Rupert	23	22.30	24	6.50	24	15.25	24	15.25	German	Roland Line	216.5	32.9	13.0	Tucuyacu, Ecuador	Cristobal, C. Z.	General.	647	1,105	698
Chasme	23	22.30	24	6.50	24	15.25	24	15.25	British	Reardon Smith Line.	400.5	54.3	22.4	Vlad'ik, U. S. S. R.	Cobb, Ireland ¹⁶	Lumber.	5,450	6,977	5,487
Maersk ¹⁴	24	2.30	24	7.17	24	17.55	24	18.50	Danish	Isbrandtsen Moller Co.	378.0	50.2	26.0	Manila, P. I.	New York, N. Y.	Sugar, general.	7,090	5,526	4,066

¹⁶ Gasoline and crude oil.¹⁷ Nitrates, beans, and logs.¹⁸ For orders.¹⁹ Launch.²⁰ Motor ship.²¹ Yacht.²² Tanker.

Queen Mand...	24	4 30	24	7 47	24	19 20	24	19 20	British...	400 2	52 3	26 0	Tocopilla, Chile...	Baltimore, Md...	Nitrates	7 550 5 748	3 955
Ohioan...	24	6 00	24	8 05	24	18 25	24	18 25	Amer-Hawaiian Line...	407 7	53 7	24 4	Guayquil, Ecuador...	New York, Mass...	General	5 788 7 103	4 991
Buenaventura...	24	7 30	24	9 00	24	20 00	24	20 00	Panama R. R. S. S. Co.	251 0	43 0	17 0	Guayquil, Ecuador...	San Francisco, N. Y.	General	1 020 2 873	1 776
Unit 15...	24	3 30	24	11 25	24	21 00	24	23 25	O. V. Boddien	26 5	6 6	6 6	Davao, P. I.	Cristobal, C. Z.	(29)	6 666 10 009	7 075
Tai Yang 14...	24	3 30	24	6 15	24	14 15	24	16 50	Barber Wilhelmsen Line	461 4	60 6	26 0	Corral, Chile...	Oslo, Norway	General	6 915 5 448	3 967
Sveajarl 14...	24	19 15	25	6 15	25	14 15	25	16 50	R. Knudsen	378 6	51 2	25 0			Nitrates	6 112 5 892	4 186
Canadian	25	1 55	25	6 38	25	16 30	25	18 30	Kerr S. S. Co.	375 0	52 6	16 0	Los Angeles, Calif.	Montreal, Canada	Lumber, general	6 112 5 892	4 186
Miller	25	5 00	25	6 56	25	15 15	25	15 40	Intercean S. S. Corp.	381 6	53 8	26 0	Vancouver, B. C.	New York, N. Y.	General	6 091 4 681	4 681
Silvercedar 14...	25	9 55	25	10 40	25	18 20	25	18 45	Captain Graham				Balboa, C. Z.	Cristobal, C. Z.	(29)	7 800 6 289	4 723
Hoyager 14...	25																
Hull No. 22...	24																

19 Towing hull No. 22. 20 Towed by launch Unity. All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS

* DEPARTURES

Date	Vessel	Line	From—	Date	Vessel	Line	For—
April 19	Lizae D. Peabody 21	Martinez & May	Cartagena, Colombia	April 19	No. 300-N 22	Pan American-Grace Airways	Panama via waypoints
April 19	Irona	United Fruit Co	Port Limon, Costa Rica	April 19	No. 9688 22	Pan American Airways	San Salvador and wayp ts
April 20	Zacapa	United Fruit Co	Cartagena, Colombia	April 19	No. 670-M 22	Pan American Airways	Miami via waypoints
April 20	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam via waypoints	April 19	Irona	United Fruit Co	New Orleans, La.
April 20	Darien C-35 22	Standard Fruit & S. Co.	Barranquilla and wayp ts	April 19	Orinoco	Hamburg-American Line	Hamburg via waypoints
April 20	Anacuena 23	A. Tagaropolos	Colon, Rep. of Panama	April 20	Magallanes	Spanish S. S. Line	Talara via waypoints
April 20	Inapaquina 23	A. Tagaropolos	Colon, Rep. of Panama	April 20	Inapaquina 23	A. Tagaropolos	Barcelona via waypoints
April 21	Stella Lykes	Lykes Brothers S. S. Co.	Lake Charles via wayp ts	April 20	Zacapa	United Fruit Co	Colon, Rep. of Panama
April 21	No. 300-N 22	Pan American-Grace Airways	Pimental via waypoints	April 21	No. 9684 22	Pan American Airways	New York via waypoints
April 22	Pastores	United Fruit Co	New York via Kingston	April 22	No. 668-M 22	Pan American Airways	San Salvador via wayp ts
April 22	Ancon	Panama R. R. S. S. Line	Miami via waypoints	April 22	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica
April 22	No. 9688 22	Pan American Airways	San Salvador and wayp ts	April 22	Stella Lykes	Lykes Brothers S. S. Co.	Sta. Domingo & waypoints
April 23	Camden	United Fruit Co	Curacao, D. W. I.	April 23	No. 145-M 22	Pan American Airways	Curacao via waypoints
April 23	Tela	United Fruit Co	New Orleans and wayp ts	April 23	Pastores	United Fruit Co	Colombian ports
April 23	Baracoa	Colombian S. S. Line	Cartagena, Colombia	April 23	Tela	United Fruit Co	Port Limon via Bocas
April 24	Amapala	Standard Fruit & S. S. Co.	New Orleans and Habana	April 23	No. 144-M 22	Pan American-Grace Airways	Pimental and waypoints
April 24	Amapala	United Fruit Co	New York via waypoints	April 24	Camden	Colombian S. S. Line	Curacao, D. W. I.
April 24	Carare	Elders & Wyffels Line	Avonmouth via waypoints	April 24	Toloca	United Fruit Co	New York via Kingston
April 24	Simon Bolivar	Royal Netherlands S. S. Co.	Port Limon, Costa Rica	April 24	Baracoa	Colombian S. S. Line	New York via waypoints
April 25	No. 670-M 22	Pan American Airways	Miami via waypoints	April 25	Swiftsure	Standard Fruit & S. Co.	Barranquilla and wayp ts
April 25	No. 9684 22	Pan American Airways	San Salvador and wayp ts	April 25	Annetta I. 23	P. W. Hamilton	Colon, Rep. of Panama
April 25	No. 144-M 22	Pan American-Grace Airways	Pimental via waypoints	April 25	Carmelita 21	Standard Fruit & S. S. Co.	Colon, Rep. of Panama
April 25	Annetta I. 23	P. W. Hamilton	Colon, Rep. of Panama	April 25	Anacuena 23	A. Tagaropolos	Colon, Rep. of Panama
April 25	Carmelita 21	Standard Fruit & S. S. Co.	Colon, Rep. of Panama	April 25	Simon Bolivar	Royal Netherlands S. S. Co.	Amsterdam via waypoints
April 25	Anacuena 23	A. Tagaropolos	Colon, Rep. of Panama	April 25	Lizzie D. Peabody 21	Martinez & May	San Andres, Colombia
April 25	Inapaquina 23	A. Tagaropolos	Colon, Rep. of Panama	April 25	Carare	Elders & Wyffels Line	Avonmouth via waypoints
April 25	Berta 21	Standard Fruit & S. S. Co.	Colon, Rep. of Panama	April 25	Amapala	Standard Fruit & S. S. Co.	New Orleans and wayp ts

PORT OF BALBOA

21 Motor schooner. 22 Air mail carrier. 23 Motor boat.

April 23	Supreme 24	Panama Bay, R. P.	April 24	Supreme 24	Van Camp Seafood Co.	Panama Bay, R. P.
April 23	Reginolia 24	Los Angeles, Calif.	April 25	Reginolia 24	Imperial Oil Co., Ltd.	Talara, Peru.

* Other than ships passing through the Canal.

21 Tanker. 24 Motor ship.

"Prince Robert" Transits Canal.

The new twin-screw steamer *Prince Robert*, of the Canadian National Steamships, transited the Canal on April 24, 1931, en route from Halifax to Vancouver, British Columbia, with 49 passengers. She docked at Balboa upon completing transit and sailed the following day for Vancouver, via intermediate ports. The *Prince Robert* is the third and last of three sister ships built especially for a ferry service connecting Victoria, Vancouver, and Seattle, and also for the Alaskan service, the *Prince Henry* and the *Prince David*, completed last year, made the transit of the Canal on June 10 and July 23, 1930, respectively. The ships are capable of a speed of 23 knots, and each is 366 feet long by 57 feet beam, with measurement of 6,692 gross tons. They were built in Great Britain.

The *Prince Robert* was delivered to her owners at Halifax in February. The ship made three winter cruises from Boston to Bermuda, Kingston, Habana, and return, and also a special cruise from Halifax to Buenos Aires and return to carry the Canadian trade delegation attending the British Empire trade exposition held in Buenos Aires.

Cargo Declarations.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., April 24, 1931.

To all concerned:

1. In view of difficulties experienced in securing satisfactory statements from vessels with regard to the nature and quantity of their cargo at time of transit through the Panama Canal, the instructions covering the filling out the Cargo Declaration have been revised in the interests of clarity and simplicity. The body of the Declaration remains essentially the same; the revised instructions are as follows:

Instructions.—A declaration on this form, of cargo carried through the Panama Canal, is required from each vessel making transit. The declarations are the basis of important statistics which are published for the benefit of shippers and ships' operators generally but no information is disclosed concerning shipments by individual ships or lines.

Accurate information is desired concerning cargo that is important by reason of its tonnage or value, but it is not expected that small and unimportant items of cargo will be listed separately. Fractional parts of tons need not be shown.

Origin and destination may be indicated by either country or port, whichever is the more convenient; however, shipments to or from the Atlantic coast of the United States should be shown as North Atlantic, South Atlantic, or Gulf. (North Atlantic includes Hampton Roads and ports north; South Atlantic ports, south of Hampton Roads and north of the southern extremity of Florida.)

General cargo.—For ships carrying "general cargo" it is desired that the principal items of cargo be listed, as far as is practicable and reasonable. If cargo has been laden at more than one country, the tons from each country (or port, if more convenient) should be shown. Similarly, if to be discharged in more than one country, the tons for each country (or for each port) should be shown.

2. Cargo Declaration forms No. 4363 will hereafter bear the revised instructions.

H. BURGESS,
Governor.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending April 25, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orinoco.....	Hamburg-American Line.....		April 19.....		1,611
Iriona.....	United Fruit Co.....	April 19.....	April 19.....	77	84
Ecuador.....	Panama Mail S. S. Co.....	April 19.....	April 20.....	199	631
Cauca.....	National Navigation Co.....	April 19.....	April 21.....	187	83
Lizzie D. Peabody.....	Martinez & May.....	April 19.....	April 25.....	(¹)	3
Magallanes.....	Spanish S. S. Line.....		April 20.....		313
Adolf von Baeyer.....	Hamburg-American Line.....	April 20.....	April 20.....	49	84
Los Angeles.....	Hamburg-American Line.....	April 20.....	April 20.....	5	80
Kinderdijk.....	Holland-America Line.....	April 20.....	April 21.....	218	53
George Washington.....	Fred Olsen & Co.....	April 20.....	April 21.....	(¹)	341
Guayaquil.....	Panama Railroad S. S. Line.....	April 20.....	April 21.....	820	98
Zacapa.....	United Fruit Co.....	April 20.....	April 21.....	73	596
Simon Bolivar.....	Royal Netherlands S. S. Co.....	April 20.....	April 22.....	69	3
San Jose.....	United Fruit Co.....	April 20.....	April 25.....	1,499	297
Stella Lykes.....	Lykes Brothers.....	April 21.....	April 22.....	686	20
Alaska.....	French Line.....	April 21.....	April 22.....	918	(²)
Canadian Highlander.....	Canadian National Steamships.....	April 22.....	April 22.....	31	(²)
Ancon.....	Panama Railroad S. S. Line.....	April 22.....		1,788	
San Marcos.....	Quaker S. S. Line.....	April 22.....	April 22.....	218	(²)
Pastores.....	United Fruit Co.....	April 22.....	April 23.....	431	343
Cauca.....	National Navigation Co.....	April 22.....		83	
Tela.....	United Fruit Co.....	April 23.....	April 23.....	870	141
Acajutla.....	Pacific Steam Navigation Co.....	April 23.....		265	
Baracoa.....	Colombian S. S. Line.....	April 23.....	April 24.....	51½	247
Guatemala.....	Panama Mail S. S. Co.....	April 23.....	April 24.....	916	23
Camden.....	United Fruit Co.....	April 23.....	April 24.....	9,503	(²)
Colombo.....	Italian S. S. Line.....	April 23.....	April 24.....	188	62
Syra.....	Hamburg-American Line.....	April 23.....	April 24.....	210	400
Cali.....	Roland Line.....	April 23.....		647	
Caldas.....	National Navigation Co.....	April 23.....	April 25.....	159	209
Tolosa.....	United Fruit Co.....	April 24.....	April 24.....	253	44
Durazzo.....	Hamburg-American Line.....		April 24.....		189
Tai Yang.....	Barber-Williamson Line.....	April 24.....	April 24.....	58	(²)
Oakland.....	Hamburg-American Line.....	April 24.....	April 24.....	30	10
Colonial.....	T. & J. Harrison.....	April 24.....	April 24.....	222	(²)
Wyoming.....	French Line.....	April 24.....	April 24.....	107	192
Buenaventura.....	Panama Railroad S. S. Line.....	April 24.....	April 25.....	86	(²)
Santa Rita.....	Grace Line.....	April 24.....	April 25.....	127	797
Simon Bolivar.....	Royal Netherlands S. S. Co.....	April 24.....	April 25.....	16	1,093
Amapala.....	Standard Fruit & S. S. Co.....	April 24.....	April 25.....	290	644
Carare.....	Elders & Fyffes, Ltd.....	April 24.....	April 25.....	1	(²)
Pacific Enterprise.....	Furness, Withy & Co.....	April 24.....	April 25.....	(¹)	256
Anachucuna.....	A. Tagaropoulos.....	April 24.....	April 25.....	42	(²)
Switsure.....	C. D. Mallory & Co.....	April 25.....		11,300	
Reina del Pacifico.....	Pacific Steam Navigation Co.....	April 25.....		107	

* No cargo discharged.

* No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending April 25, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Charles Nelson.....	Nelson Line.....	April 17.....	April 19.....	644	
Santa Elisa.....	Grace Line.....	April 17.....	April 17.....	10	4
Santa Maria.....	Grace Line.....	April 16.....	April 17.....	317	
San Jose.....	United Fruit Co.....	April 19.....	April 20.....	247	27
Ecuador.....	Panama Mail S. S. Co.....	April 20.....	April 21.....	14	2
Nosa Queen.....	N. O. & S. A. S. S. Co.....	April 20.....	April 21.....		201
Canadian Highlander.....	Canadian National Steamships.....	April 21.....	April 22.....	16	
Dorothy Cahill.....	Arrow Line.....	April 21.....	April 22.....	2,613	
Guatemala.....	Panama Mail S. S. Co.....	April 22.....	April 23.....	76	
Reginote.....	Imperial Oil Co., Ltd.....	April 23.....	April 24.....	12,064	

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference. It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective April 27, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.28
Gasoline, motor grade.....	Gal.	.15
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.08
Oil, marine engine.....	Gal.	.40
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal.			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal	April 28.....	May 3.....	May 6.....	May 10.....	May 13.....	May 18.....
Ancon	May 12.....	May 17.....	May 20.....	May 24.....	May 27.....	June 1.....
Cristobal	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.....
Ancon	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.....
Cristobal	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.....
Ancon	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.....
Cristobal	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.....
Ancon	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.....
Cristobal	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.....
Ancon	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.....
Cristobal	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.....
Ancon	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.....
Cristobal	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.....
Ancon	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.....
Cristobal	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.....
Ancon	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.....
Cristobal	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.....
Ancon	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.....

* Effective April 28th, steamers sail daylight saving time.

* Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Trips Through the Canal.

The following lines operating passenger vessels through the Canal carry local passengers from one terminal to the other: Chilean Line, Grace Line, Hamburg-American Line, Navigazione Generale Italiana, North German Lloyd, Pacific Steam Navigation Co., Panama Mail Steamship

Co. The Hamburg-American Line, North German Lloyd and Panama Mail charge \$6 for the trip, the others \$10 for first-class passage. The Chilean Line has also a rate of \$4 for intermediate class, and the Panama-Pacific Line a rate of \$6 for tourist class. The several services together afford about 4 transits of the Canal each way every week.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

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at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., May 6, 1931. No. 40.

Canal Traffic During April, 1931.

During the month of April, 1931, 453 commercial vessels and 17 small nonseagoing launches transited the Canal. Tolls on the commercial vessels aggregated \$2,014,349.13, and on the launches \$64.50, or a total tolls collection of \$2,014,413.63.

The daily average of commercial vessels was 15.10, and the average tolls collection was \$67,144.97, as compared with an average of 14.16 transits and \$63,368.85 in tolls for the previous month, and an average of 16.30 transits and \$74,425.43 in tolls for April, 1930. The average amount of tolls paid by each of the commercial transits was \$4,446.69, as compared with \$4,565.98 for the month of April, 1930.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 10 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 10 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
Total, first 10 months of fiscal year, 1931.....	4,701	20,900,595.66	15.46	68,751.96
Total, first 10 months of fiscal year, 1930.....	5,228	22,812,996.88	17.20	75,042.75
Total, first 10 months of fiscal year, 1929.....	5,386	22,703,024.37	17.72	74,681.00

In comparison with the first 10 months of the fiscal year 1930, the traffic in the corresponding period this year has had 527 fewer transits and \$1,912,401.22 less in tolls, decreases of 10.1 per cent and 8.4 per cent, respectively.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 2, 1931.

No. 876.

Ecuador, Gulf of Guayaquil, Puna Island, Salinas Point Shoals light buoy.—The following is quoted from Daily Memorandum No. 6911 of the Hydrographic Office at Washington, D. C., dated April 22, 1931:

The first officer of the American M. S. *Santa Rita*, of the Grace Line, reports that from observations Salinas Point Shoals light buoy was found to be located 9 miles 46" from Santa Clara Island lighthouse, in latitude 3° 04' 30" S., longitude 80° 19' W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, May 2, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)			Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.		Nature.	Tons.	Gross.						Net.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Oregonian.	25	20	10	26	6	10	26	14	38	26	15	55	American	404	6	53.9	19.0	Boston, Mass.	San Francisco, Cal.	General	3,338	6,754	4,800																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Cape Verde.	25	20	25	26	6	15	26	15	40	26	17	00	British	405	5	53.5	22.6	St. Lucia, B. W. I.	Vancouver, B. C.	Sugar	6,000	5,736	4,118																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Steel Mariner.	26	1	00	26	7	10	26	16	10	26	17	00	American	424	2	56.2	26.0	New Orleans, La.	Shanghai, China	General	7,888	7,611	5,450																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Holystone.	26	1	55	26	7	20	26	16	21	26	17	30	British	397	4	54.0	14.0	Tyne, England	Vancouver, B. C.	Ballast	5,843	4,268																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Reina del Pacifico.	25	19	45	26	9	15	26	17	09	26	18	05	British	550	1	76.3	28.2	Liverpool, England	Talcahuano, Chile	General	2,841	18,871	13,099																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Port Fairy.	26	6	05	26	8	45	26	17	29	26	22	00	British	477	3	63.0	23.1	Glasgow, Scotland	Nelson, N. Z.	General	2,983	10,673	7,757																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Malayan.	26	7	15	26	9	50	26	17	45	26	19	00	British	441	6	60.0	25.9	New York, N. Y.	Manila, P. I.	General	6,238	9,209	6,245																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Prince of Wales.	26	17	00	26	18	25	27	9	35	27	10	43	Japanese	385	0	51.0	25.0	New York	Yokohama, Japan	Phosphate,cotton	6,917	6,209	4,763																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Kofuku Maru.	26	23	40	27	6	20	27	14	08	27	15	05	Norwegian.	451	9	59.2	20.10	Cardiff, England.	Los Angeles, Calif	Ballast	7,944	5,408																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Sandar.	27	1	25	27	7	05	27	15	11	27	16	20	American	391	8	51.3	19.6	New York, N. Y.	Los Angeles, Calif	Ballast	5,550	3,920																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Kokosee.	27	1	25	27	7	05	27	15	11	27	16	20	American	391	8	51.3	19.6	New York, N. Y.	Los Angeles, Calif	Ballast	5,550	3,920																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Robinson Hood.	27	7	05	27	8	15	27	16	24	27	17	45	American	424	8	56.0	23.6	Baltimore, Md	Seattle, Wash.	General	5,827	7,473	5,533																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Robertson.	27	8	00	27	9	20	27	16	41	27	17	55	British.	409	6	54.0	16.6	North Shields, Eng.	Vancouver, B. C.	Ballast.	5,761	4,129																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Henry D.	27	21	25	28	6	10	28	14	10	28	15	20	American	371	0	51.9	21.6	New York, N. Y.	Tacoma, Wash.	Sulphur.	4,400	5,357	2,900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Winton.	28	6	00	28	6	45	28	14	56	28	16	00	Norwegian.	351	3	51.4	14.0	Celo, Norway	Los Angeles, Calif	Ballast.	4,944	3,513																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Brynje.	28	6	50	28	7	30	28	15	27	28	16	30	British	401	6	54.3	24.3	Tampa, Fla.	Kobe, Japan	General	7,100	6,656	4,954																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Budapest.	28	10	25	28	10	35	28	17	19	28	18	20	American	471	0	57.2	18.0	Boston, Mass.	Tacoma, Wash.	General.	2,718	9,154	6,966																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Texas.	28	10	25	28	11	40	28	18	19	29	1	04	British	482	6	64.0	17.0	London, England.	Wellington, N. Z.	Ballast.	11,819	8,367																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Zealandic.	28	10	25	28	11	40	28	18	19	29	1	04	British	482	6	64.0	17.0	London, England.	Wellington, N. Z.	Ballast.	11,819	8,367																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Chilore.	27	11	05	28	12	30	28	20	20	28	21	15	American	549	6	72.0	21.6	Norfolk, Va.	Cruz Grande, Chile	Ballast.	14,538	4,480																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Roy.	27	11	05	28	12	30	28	20	20	28	21	15	American	549	6	72.0	21.6	Norfolk, Va.	Cruz Grande, Chile	Ballast.	14,538	4,480																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Gen. Morgan.	28	6	30	28	11	35	28	13	50	28	15	39	American	150	0	28.0		Cristobal, C. Z.	Gatun, C. Z.	Ballast.	2	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Lewis.	28	16	50	28	18	00	28	19	21	29	10	42	American	409	7	54.2	16.9	Cristobal, C. Z.	Pedro Miguel, C. Z.	Ballast.	2,620	6,687	4,974																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Pacific Oak.	28	21	00	28	6	15	29	13	09	29	14	30	American	416	8	56.1	18.6	New York, N. Y.	Seattle, Wash.	General	6,945	5,011																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Illinois.	28	21	00	28	6	15	29	13	09	29	14	30	American	416	8	56.1	18.6	New York, N. Y.	Seattle, Wash.	General	6,945	5,011																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Helen.	28	21	00	28	6	15	29	13	09	29	14	30	American	416	8	56.1	18.6	New York, N. Y.	Seattle, Wash.	General	6,945	5,011																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Whittier.	28	21	25	29	6	15	29	13	58	29	15	10	American	409	6	54.2	18.0	Baltimore, Md	Los Angeles, Calif	General	3,200	6,667	4,949																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Langford.	29	00	55	29	7	10	29	15	39	29	16	45	British.	370	0	56.2	14.0	Newcastle, England	Vancouver, B. C.	Ballast.	3,200	6,667	4,949																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Harry Luck.	29	00	55	29	7	10	29	15	39	29	16	45	British.	370	0	56.2	14.0	Newcastle, England	Vancouver, B. C.	Ballast.	3,200	6,667	4,949																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
enbach.	29	2	45	29	7	20	29	15	01	29	16	15	American	448	9	60.2	22.5	Boston, Mass.	Vancouver, B. C.	General	3,613	9,262	6,853																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Acapulco.	29	14	45	29	8	55	29	17	08	29	18	30	British.	215	7	34.0	14.5	Cristobal, C. Z.	Seattle, Wash.	General	543	1,273	706																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Toten.	29	5	00	29	8	45	29	16	15	29	21	11	Chilean.	421	3	56.0	19.6	New York, N. Y.	Champerio, Guat	General	3,387	7,394	5,459																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Chilep.	29	19	30	30	6	10	30	13	30	30	14	45	American	411	5	54.1	19.2	New York, N. Y.	Valparaiso, Chile	General	2,099	6,669	4,973																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Chilep.	29	19	30	30	6	10	30	13	30	30	14	45	American	411	5	54.1	19.2	New York, N. Y.	Valparaiso, Chile	General	2,099	6,669	4,973																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
New Jersey.	29	23	35	30	7	15	30	14	24	30	18	10	American	417	0	56.1	19.0	New York, N. Y.	Champan, Chile	General	2,099	6,669	4,973																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Saramacca.	27	19	25	30	7	40	30	14	53	30	14	53	American	336	0	42.0	17.9	Cristobal, C. Z.	San Luis Obispo	Ballast	6,925	4,982																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Wilson.	30	11	05	30	11	20	30	17	31	30	22	43	American.	516	5	72.2	27.0	New York, N. Y.	San Francisco, Cal.	Ballast.	3,668	2,308																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
President Wilson.	30	11	05	30	11	20	30	17	31	30	22	43	American.	516	5	72.2	27.0	New York, N. Y.	San Francisco, Cal.	Ballast.	3,668	2,308																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Tanker.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

¹Launch.²Motor ship.³Tanker.

F. L. Luckenbach	30	19.50	30	20.15	1	12.25	1	13.30	American	Luckenbach Line	446.0	56.0	25.0	New Orleans, La.	Los Angeles, Calif.	General	5,119	8,508	6,179
Santa Barbara	30	13.15	30	21.20	1	8.50	1	13.20	American	Grace Line	406.0	64.0	24.0	New York, N. Y.	Talcahuano, Chile	General	2,808	10,687	6,633
Cauca	22	22.30	1	6.00	1	14.05	1	17.40	Colombian	National Navigation Co.	107.0	23.0	10.6	Cristobal, C. Z.	Buenaventura, Col.	General	228	262	161
Jason	30	7.30	1	6.10	1	14.12	1	15.30	Dutch	Royal Neth. S. S. Co.	347.0	48.0	19.3	Amsterdam, Holland	Corral, Chile	General	1,923	4,321	3,120
Dio	1	5.45	1	6.15	1	15.58	1	19.00	American	Gulf Pae, Redwood Line	381.0	52.2	22.6	New Orleans, La.	Los Angeles, Calif.	Coke, phosphate	5,400	5,708	4,131
Pennsylvania	1	5.35	1	7.25	1	15.06	2	20.27	American	Panama-Pacific Line	586.4	80.3	30.0	New York, N. Y.	San Francisco, Cal.	General	3,555	25,262	18,194
Steel Age	1	8.05	1	8.20	1	16.27	1	20.20	American	Norton, Lilly & Co.	395.0	55.0	27.0	Mobile, Ala.	Honolulu, T. H.	Steel	8,084	7,330	5,245
Jefferson	1	4.05	1	10.25	1	17.26	1	18.45	American	States S. S. Co.	440.0	57.0	19.3	Liverpool, England	Vancouver, B. C.	Autos, general	2,865	8,300	6,020
Meyers	30	19.05	1	11.32	1	17.62	1	18.45	Italian	Nas. Libera Triesteina	464.2	56.4	16.3	Tripoli, Italy	Vancouver, B. C.	General	951	8,423	5,806
Timavo	30	19.00	1	13.15	1	20.25	1	21.36	American	Standard Transp. Co.	368.3	62.7	19.0	Boston, Mass.	Los Angeles, Calif.	Ballast	9,744	7,140	
Dixie Arrow	1	13.00	1	14.18	1	20.51	1	22.20	German	North German Lloyd	400.0	51.0	17.7	Hamburg, Germany	Valparaiso, Chile	General	2,836	5,038	3,533
Erfurt	1	18.55	1	19.20	2	11.58	2	13.15	British	R. Chapman & Son	400.0	52.2	16.0	Newcastle, England	Vancouver, B. C.	Ballast	5,710	4,164	
Laurits	1	11.50	2	6.12	2	12.48	4	13.30	Norwegian	Fred Olsen & Co.	435.0	56.0	19.3	Oslo, Norway	Vancouver, B. C.	General	2,935	7,963	5,837
Swenson	1	20.20	2	7.05	2	14.46	2	16.00	American	Sun Oil Co.	481.0	66.0	21.0	Chester, Pa.	Los Angeles, Calif.	Ballast	9,607	6,548	
Eastern Sun	1	20.20	2	7.05	2	14.46	2	16.00	American	Richfield Oil Co.	429.0	59.2	19.0	Baltimore, Md	Los Angeles, Calif.	Ballast	7,720	5,615	
Agriworld	1	23.25	2	8.10	2	15.05	2	16.15	American	Hain S. S. Co.	400.2	52.1	13.6	Tyne, England	Vancouver, B. C.	Ballast	5,707	4,319	
Treloske	1	23.15	2	8.30	2	16.10	2	17.30	British	Rolland S. S. Line	426.5	32.9	12.9	Cristobal, C. Z.	Guayaquil, Ecuador	General	250	1,105	698
Cal	23	19.30	2	9.05	2	17.51	2	18.33	German	The Texas Co.	216.0	57.0	22.2	Baltimore, Md	Los Angeles, Calif.	Ballast	7,484	5,216	
Washington	2	5.50	2	9.40	2	17.10	2	19.00	American	Anglo-Saxon Pet. Co.	412.0	53.3	18.0	Montreal, Canada	Los Angeles, Calif.	Ballast	6,189	4,235	
Acadto	2	13.55	2	14.10	2	22.48	3	7.18	British										

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Lebore	26	1.30	26	5.55	26	15.35	26	15.35	American	Ore S. S. Corp.	549.6	72.2	35.0	Baltimore, Md	Iron ore	21,800	14,325	4,635
Northern	25	21.00	26	6.26	26	15.45	26	15.45	American	Sun Oil Co.	480.6	66.0	29.0	Chester, Pa.	Gasoline	13,591	9,761	6,649
Sun	25	18.45	26	7.20	26	16.35	26	16.35	British	Blue Star Line	499.8	64.0	28.0	Newcastle, England	Frozen, general	8,601	11,673	8,143
Dorister	25	22.05	26	8.10	26	17.00	26	17.00	Norwegian	Anglo-Saxon Pet. Co.	441.6	57.5	26.0	Curacao, D. W. I.	Gasoline	9,901	7,589	5,312
Atlantic	26	4.00	26	8.48	26	17.45	26	17.45	American	Calmar Line	399.7	56.2	27.0	Philadelphia, Pa.	Lumber	7,900	7,381	5,595
Almar	26	12.15	26	13.03	26	19.50	27	14.27	German	Hamburg-American Line	309.3	44.8	14.5	Hamburg, Germany	Coffee, general	975	3,397	2,337
Kreta	26	19.20	27	6.16	27	15.15	27	17.40	British	International Pet. Co.	565.7	75.6	34.0	Halifax, N. S.	Crude oil	20,739	16,780	9,885
C. O. Sill	26	23.55	27	6.36	27	14.25	27	14.25	American	Isthmian S. S. Lines	424.2	56.2	27.0	Avonmouth, Eng.	General	7,536	7,611	5,450
Steel Ranger	27	1.15	27	7.02	27	16.29	27	16.29	American	Amer-Hawaiian Line	407.7	53.7	25.0	Boston, Mass.	General	5,367	7,150	5,024
Minnesota	27	6.00	27	8.26	27	15.55	28	10.10	American	Grace Line	483.3	63.9	24.0	New York, N. Y.	Copper, general	5,209	11,680	7,442
Santa Clara	27	1.40	27	8.29	27	17.05	27	17.05	British	Reardon Smith Line	401.6	54.3	24.2	Cardiff, Wales	General	7,061	6,621	4,916
Sacramento	27	8.00	27	9.01	27	17.55	27	19.55	American	Standard Oil Co., N. Y.	468.3	62.7	28.2	Boston, Mass.	Gasoline	11,286	9,841	6,946
Valley	27	3.10	27	9.39	27	19.00	28	2.35	German	North German Lloyd	431.2	56.4	26.0	Bremen, Germany	General	2,666	7,253	5,012
Empire Arrow	26	13.00	27	12.19	27	19.20	30	7.40	American	United Fruit Co.	336.7	42.0	19.0	Cristobal, C. Z.	Coffee, general	4,065	3,668	2,308
Kongberg	27	16.30	27	17.16	28	13.15	28	13.15	Danish	East Asiatic Co.	465.4	62.2	28.0	Copenhagen, Den.	General	9,563	11,060	8,076
Saratonic	27	12.10	28	6.08	28	14.10	28	14.55	American	Panama-Pacific Line	574.4	80.3	28.0	New York, N. Y.	General	4,427	24,506	17,565
América	27	23.50	28	6.45	28	15.55	28	16.50	Italian	Nas. Libera Triesteina	436.6	55.4	27.0	Trieste, Italy	Wheat, general	8,511	7,790	6,010
California	27	23.50	28	6.45	28	15.55	28	16.50	Italian	Nas. Libera Triesteina	436.6	55.4	27.0	Trieste, Italy	Wheat, general	8,511	7,790	6,010
China	28	00.05	28	7.28	28	16.50	28	16.50	Norwegian	Panama-Pacific Line	377.6	54.0	24.5	U. S. Atlantic ports	Sugar	7,200	6,079	4,534
Suadad	28	4.15	28	7.46	28	17.45	28	18.30	British	Panama-Pacific Line	402.5	55.0	25.3	Rotterdam, Holland	Wheat, general	8,330	6,085	4,289
Nasuda	28	6.15	28	8.18	28	18.15	28	19.40	Danish	East Asiatic Co.	410.0	55.2	29.0	Copenhagen, Den.	(⁶)	8,823	7,027	5,341
Panama	28	8.00	28	8.52	28	18.25	28	21.40	American	Luckenbach Line	426.6	57.2	26.0	Boston, Mass.	General	6,193	8,543	6,427
Edward Luckenbach	28	8.00	28	8.52	28	18.25	28	21.40	American	Luckenbach Line	426.6	57.2	26.0	Boston, Mass.	General	6,193	8,543	6,427

* Wheat, lumber, and general.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Duchessa	28	9 45	28	10 58	28	20 07	29	1 25	Italian.	Nav. Libera Tristina.	447.3	57.1	27.5	Vancouver, B. C.	Naples, Italy.	General.	7 295	8 734
D'Aosta 7	28	11 50	28	12 33	28	20 00	28	20 00	American.	Isthmian S. S. Lines.	424.8	55.2	25.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	7 533	7 472
Robin Gray.	28	10 15	28	14 23	28	21 25	28	21 25	American.	Ford Motor Co.	250.5	43.6	21.0	Aberdeen, Wash.	New York, N. Y.	Lumber, auto pks.	2 916	2 692
Lake Gorin.	28	10 15	28	14 23	28	21 25	28	21 25	American.	Ford Motor Co.	250.5	43.6	21.0	Aberdeen, Wash.	New York, N. Y.	Lumber, auto pks.	2 916	2 692
Florence	28	14 30	28	15 24	28	22 40	28	22 40	American.	Luckenbach Line.	401.8	52.2	23.0	Portland, Oreg.	New Orleans, La.	General.	5 157	6 002
Willboro.	29	00 40	29	6 46	29	14 05	29	14 05	American.	Amer.-Hawaiian Line.	415.0	56.0	28.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	8 575	7 717
Hokuriki	29	4 00	29	7 28	29	15 15	29	15 15	Japanese.	Osaka Shosen Kaisha.	446.0	60.5	24.0	Shanghai, China.	Baltimore, Md.	General.	4 809	8 942
Maru 7.	29	1 30	29	7 58	29	16 00	29	16 00	Norwegian.	Panama Mail S. S. Co.	214.2	34.3	12.0	Acajutla, Salvador.	Cristobal, C. Z.	General.	4 400	1 158
Heilo.	29	8 45	29	9 30	29	17 40	30	1 25	British.	Royal Mail S. P. Co.	430.2	58.3	26.0	Vancouver, B. C.	Hamburg, Germany.	General.	6 436	8 878
Pacific Red-wood	29	13 40	29	14 40	29	22 55	29	22 55	American.	Dimon S. S. Corp.	409.6	54.2	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7 618	6 537
New York 7.	29	15 10	29	16 11	30	9 00	30	9 00	American.	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Providence.	Gasoline.	8 507	6 775
Takedayo Maru	29	20 30	30	6 09	30	14 05	30	21 45	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	27.0	Itoilo, P. I.	New York, N. Y.	General.	8 733	7 072
Nordcap 7.	29	23 30	30	6 45	30	14 30	30	14 30	Danish.	Dupont de Nemours.	384.7	54.4	25.0	Tacoma, Chile.	Norfolk, Va.	Nitrates.	7 890	6 515
San Clemente.	30	2 20	30	7 47	30	15 15	30	15 15	American.	Quaker Line.	410.0	54.4	25.0	Portland, Oreg.	Philadelphia, Pa.	Lumber, general.	6 846	6 476
Helder	30	3 00	30	8 01	30	16 05	30	22 35	Dutch.	Royal Ned. S. S. Co.	361.4	49.8	23.2	Corral, Chile.	Hamburg, Germany.	General.	5 226	5 117
Oraio 7.	30	3 35	30	10 11	30	17 20	2	11 45	Italian.	Nav. Generale Italiana.	482.8	61.1	23.0	Tacahuano, Chile.	Genoa, Italy.	General.	1 604	12 977
San Jose.	30	13 00	30	13 32	30	20 10	1	17 15	French.	Franch Line.	431.1	57.2	25.0	Vancouver, B. C.	Haere, France.	General.	5 590	7 767
Sally Maerak 7.	30	15 30	30	16 37	30	21 10	1	11 20	Danish.	Isbrandtsen, Moller Co.	332.1	44.2	22.0	Manila, P. I.	Cape Hatteras.	Sugar, lumber.	4 324	3 518
Tainui	30	22 36	1	8 06	1	15 55	1	22 15	British.	Shaw, Savill & Albion.	477.8	67.6	27.0	Lyttelton, N. Z.	London, England.	General.	7 622	10 657
Oreoma	1	00 20	1	8 38	1	16 55	1	21 30	British.	Hamburg-American Line.	511.6	62.2	28.0	Tacahuano, Chile.	Hamburg, Germany.	General.	7 622	10 657
Scotsburg	1	5 10	1	8 56	1	18 00	1	18 00	American.	Pacific Steam Nav. Co.	417.5	61.1	25.0	Vancouver, B. C.	Liverpool, England.	General.	7 622	10 657
Herman Frasch	1	7 00	1	9 18	1	18 35	1	20 15	American.	Amer. Gulf Orient Line.	365.0	51.6	26.0	Manila, P. I.	New Orleans, La.	Lumber.	10 364	8 696
Invincible.	30	18 10	1	12 44	1	20 35	1	18 15	American.	A. C. Dutton Line.	440.1	56.2	28.0	Everett, Wash.	Poughkeepsie, N. Y.	Lumber.	5 412	5 339
Sea Thrush.	1	12 15	1	12 49	1	20 55	1	20 55	American.	Tampa Intercean Co.	440.1	56.2	28.0	Manila, P. I.	New Orleans, La.	General.	9 644	8 339
Caldas 7.	1	13 35	1	15 11	1	22 30	1	20 55	American.	Shepard S. S. Co.	416.0	54.2	25.0	Buenaventura, Col.	Philadelphia, Pa.	Lumber, general.	7 409	6 625
Santa Inez 7.	1	13 06	2	6 11	2	13 12	2	20 15	Colombian.	National Navigation Co.	370.0	53.2	21.0	Valparaiso, Chile.	Cristobal, C. Z.	General.	192	211
Virginian	1	20 00	2	6 45	2	13 55	2	20 15	American.	Amer.-Hawaiian Line.	491.5	58.2	28.0	Seattle, Wash.	New York, N. Y.	Lumber, general.	8 439	6 255
Margaret	2	4 15	2	6 51	2	14 40	2	21 45	Sweden.	Johnson Line.	407.3	54.1	25.0	Vancouver, B. C.	Stockholm, Sweden.	General.	5 782	7 048
Johnson 7.	2	4 00	2	14 19	2	22 45	2	22 45	German.	North German Lloyd.	749.4	83.1	31.0	New York, N. Y.	New York, N. Y.	Cotton.	125 83	999 20
Columbus 7.	2	8 15	2	15 25	2	22 35	3	39.5	American.	Rosevelt S. S. Co.	395.5	55.0	27.0	Mamagid, P. I.	Sugar, general.	Sugar, general.	8 227	7 209
Wichita 7.	2	8 15	2	15 25	2	22 35	3	39.5	American.	U. S. Army.	395.5	55.0	27.0	Pedro Miguel, C. Z.	Cristobal, C. Z.	Ballast.	8 227	7 209
Morgan Lewis 8.	28				28				American.	U. S. Army.	395.5	55.0	27.0	Pedro Miguel, C. Z.	Cristobal, C. Z.	Ballast.	8 227	7 209

7 Motor ship. 8 Tug. 9 For orders. 10 Around the world 11 Frozen, wool and tallow. 12 Coconut oil and sugar.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 26.....	Schenck No. 159 ²¹ .	U. S. Navy.	High seas.	April 25.....	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama
April 26.....	Tela.	United Fruit Co.	Port Limon, Costa Rica.	April 26.....	No. 9688 ¹⁴ .	Pan American Airways.	San Salvador via wayp'ls.
April 26.....	No. 145-M ¹⁴ .	Pan American Airways.	La Guayra via wayp'ls.	April 26.....	No. 669-M ¹⁴ .	Pan American Airways.	Miami via wayp'ls.
April 26.....	Nueva Espana ¹⁵ .	Diez & Garcia.	Colon, Rep. of Panama.	April 26.....	Tela.	United Fruit Co.	New Orleans, La.
April 27.....	Flandre.	French Line.	St. Nazaire via wayp'ls.	April 26.....	Ancon.	Panama R. R. & S. S. Line.	New York via Haiti.
April 27.....	Augusta ¹⁶ .	U. S. Navy.	Guanquamo, Cuba.	April 27.....	Swiftsure.	Shell Oil Co.	Curacao, D. W. I.
April 27.....	Darien C-35 ¹⁴ .	Seadta Airplane Co.	Barranquilla and wayp'ls.	April 27.....	Schenck No. 159 ¹³ .	U. S. Navy.	Bluefields, Nicaragua.
April 28.....	Pastores.	United Fruit Co.	Cartagena, Colombia.	April 29.....	No. 9664 ¹⁴ .	Pan American Airways.	San Salvador and wayp'ls.
April 28.....	No. 300-N ¹⁴ .	Pan American Airways.	Pimental via wayp'ls.	April 29.....	No. 670-M ¹⁴ .	Pan American Airways.	Miami via wayp'ls.
April 28.....	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.	April 29.....	Pastores.	United Fruit Co.	New York via wayp'ls.
April 28.....	Anacuena ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.	April 29.....	Flandre.	French Line.	Hayre via wayp'ls.
April 29.....	Iriona.	United Fruit Co.	New Orleans, La.	April 29.....	Inapaquina ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.
April 29.....	Metapan.	U. S. Government.	New York via wayp'ls.	April 29.....	Iriona.	United Fruit Co.	Colon, Rep. of Panama.
April 30.....	No. 689-M ¹⁴ .	Pan American Airways.	San Juan, Puerto Rico.	April 30.....	No. 145-M ¹⁴ .	Pan American Airways.	Port Limon via Bocas.
April 30.....	No. 9688 ¹⁴ .	Pan American Airways.	Miami via wayp'ls.	April 30.....	No. 144-M ¹⁴ .	Pan American-Grace Airways.	Maracaibo via wayp'ls.
April 30.....	Bogota.	Colombian S. S. Line.	San Salvador and wayp'ls.	April 30.....	Metapan.	United Fruit Co.	Talara via wayp'ls.
May 1.....	Ufua.	United Fruit Co.	New York via wayp'ls.	May 1.....	No. 9688 ¹⁴ .	Pan American Airways.	Colombian ports.
May 1.....	Celalu.	Standard Fruit & S. S. Co.	New Orleans via Habana.	May 1.....	Darien C-35 ¹⁴ .	Seadta Airplane Co.	San Salvador and wayp'ls.
May 1.....	Annetta I. ¹⁵ .	C. Connolly.	Colon, Rep. of Panama.	May 1.....	Bogota.	Colombian S. S. Line.	Barranquilla and wayp'ls.
May 1.....	Geo. W. Barnes.	Pan American Pet. & Transp. Co.	Aruba, D. W. I.	May 1.....	Ufua.	U. S. Navy.	New York and Kingston.
May 1.....	Grinewald.	Hamburg-American Line.	Tampico via wayp'ls.	May 1.....	R. A. Glenn ¹⁸ .	C. Connolly.	New York via wayp'ls.
May 2.....	Pollux.	Anglo-Saxon Petroleum Co.	Curacao, D. W. I.	May 1.....	Celalu.	Standard Fruit & S. S. Co.	Port Limon, Costa Rica.
May 2.....	No. 9664 ¹⁴ .	Pan American Airways.	San Salvador and wayp'ls.	May 2.....	Annetta I. ¹⁵ .	P. W. Hamilton.	Colon, Rep. of Panama.
May 2.....	No. 668-M ¹⁴ .	Pan American Airways.	Miami via wayp'ls.	May 2.....	Carmelita ¹⁹ .	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 2.....	No. 144-M ¹⁴ .	Pan American-Grace Airways.	Pimental via wayp'ls.	May 2.....	Anacuena ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.
May 2.....	Anacuena ¹⁵ .	A. Tagaropolos.	Colon, Rep. of Panama.	May 2.....	Carmelita ¹⁹ .	Diez & Garcia.	Colon, Rep. of Panama.
May 2.....	Standard Fruit & S. S. Co.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.				

¹³ Destroyer. ¹⁴ Air mail carrier. ¹⁵ Motor boat. ¹⁶ Cruiser. ¹⁷ Lighthouse tender. ¹⁸ Yawl. ¹⁹ Motor schooner. ²⁰ Cruiser.

PORT OF BALBOA

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
April 27.....	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.	April 28.....	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.
April 30.....	May 1.....	Shell Oil Co.	Los Angeles, Calif.	May 2.....	May 1.....	Shell Oil Co.	Los Angeles, Calif.
May 1.....	May 1.....	Union Oil Co. of Calif.	Los Angeles, Calif.	May 2.....	Cathwood ² .	Union Oil Co. of Calif.	Los Angeles, Calif.
May 1.....	May 1.....	Hans Elliot.	Panama Bay, R. P.	May 1.....	Nueva Espana ²¹ .	Hans Elliot.	Panama Bay, R. P.
May 1.....	May 1.....	Hans Elliot.	Panama Bay, R. P.	May 1.....	Sambu ²¹ .	Hans Elliot.	Panama Bay, R. P.
May 1.....	May 1.....	Hans Elliot.	Panama Bay, R. P.	May 1.....	Real ²¹ .	Hans Elliot.	Panama Bay, R. P.
May 1.....	May 1.....	Hans Elliot.	Panama Bay, R. P.	May 1.....	El Libertador ²¹ .	Real	Panama Bay, R. P.
May 1.....	May 1.....	A. Valdez.	Panama Bay, R. P.	May 1.....	Dos Hermanos ²¹ .	A. Valdez.	Panama Bay, R. P.

* Other than ships passing through the Canal.

¹ Tanker. ²¹ Motor schooner. ²² Motor ship.

The "Columbus" and Other Large Ships on Cruises around the World.

The German steamship *Columbus*, of the North German Lloyd, arrived at Balboa on the morning of May 2, 1931, with a party of 350 tourists on board. Transit of the Canal was made the same day, en route to New York, via Habana, where the vessel is due to arrive on May 8, 1931, completing a cruise around the world of 30,000 miles covering a period of almost 4 months. The *Columbus* made her first around-the-world cruise last year, transiting the Canal on May 3, 1930. She is the largest commercial ship to have transited the Canal in point of length, registered gross and net tonnage, and Panama Canal net tonnage.

The *Columbus*, which was the flagship of the North German Lloyd fleet before the advent of the *Europa* and *Bremen*, is 749 feet long and of 32,565 gross and 15,988 net tons, registry measurement, and 20,079 net tons, Panama Canal measurement. Tolls, limited to \$1.25 per ton on a net tonnage of 12,793 as determined under United States registry measurement, amounted to \$15,991.25. This was less than the tolls paid by the *Empress of Scotland*, the *America*, and the *Belgenland*, ships of less length and gross tonnage than the *Columbus*.

Two other vessels on especially conducted around-the-world cruises are due to transit the Canal this month, the *Resolute*, of the Hamburg-American Line, arriving on or about the 18th, and the *Franconia*, of the Cunard Line, arriving on or about the 21st. Both vessels left New York last January, sailing eastward via Suez. The *Belgenland*, of the Red Star Line, transited the Canal December 23, 1930, sailing westward on an around-the-world cruise.

Traffic by Nationality for April, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for April, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
British	60	334,857	238,603	403,838	244,381	\$269,865.04	111,669
Chilean	3	13,194	9,219	16,237	9,458	11,523.75	5,471
Colombian	5	731	712	1,113	716	862.10	985
Danish	5	22,809	16,371	24,976	16,510	17,997.70	18,456
Danzig	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch	5	23,561	16,367	27,012	16,557	20,458.75	9,215
French	3	17,494	11,401	20,589	11,894	14,251.25	4,650
German	13	47,237	30,721	52,246	31,057	38,401.25	22,531
Italian	2	17,372	13,441	24,954	14,083	16,801.25	2,377
Japanese	11	56,189	45,631	69,953	44,892	56,874.55	65,126
Norwegian	19	89,012	63,265	105,055	63,261	66,068.89	21,957
Panamanian	1	6,967	3,610	6,604	4,057	4,512.50	3,867
Swedish	5	25,523	16,514	36,982	20,642	19,200.87	15,310
United States	102	521,973	395,638	650,174	395,801	451,957.12	271,995
Total, April, 1931	235	1,185,143	868,561	1,451,908	880,283	994,696.30	553,609
Total, April, 1930	240	1,226,284	910,658	1,511,780	917,996	1,061,309.99	806,119
Total, April, 1929	259	1,190,510	907,312	1,479,562	911,493	1,046,690.90	862,450

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,103	3,247	5,942	3,607	\$4,058.75	6,920
British.....	50	296,881	216,459	365,326	222,956	267,756.35	323,960
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,806
Colombian.....	4	570	550	880	550	626.23	577
Danish.....	11	55,039	39,822	64,338	40,564	49,777.50	89,324
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,248
Dutch.....	5	22,111	14,364	24,150	14,685	17,955.00	28,292
French.....	5	28,899	18,552	34,414	19,083	23,190.00	39,321
German.....	12	36,022	24,607	41,942	24,579	30,758.75	41,333
Italian.....	4	30,856	19,374	38,320	22,942	24,217.50	18,630
Japanese.....	10	51,734	43,754	64,817	42,220	54,358.75	73,760
Norwegian.....	14	73,727	49,709	82,498	49,341	62,136.25	105,556
Panamanian.....	2	69	65	106	66	51.90	
Spanish.....	1					1,648.50	
Swedish.....	5	23,558	17,020	37,411	21,120	21,275.00	52,698
United States.....	92	471,164	359,905	582,811	358,647	448,674.85	657,083
Total, April, 1931.....	218	1,107,662	817,962	1,362,440	831,310	1,019,652.83	1,457,508
Total, April, 1930.....	249	1,252,812	939,146	1,563,708	954,028	1,171,453.01	1,650,663
Total, April, 1929.....	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218

¹ Naval vessel of 3,297 displacement tons.

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,103	3,247	5,942	3,607	\$4,058.75	6,920
British.....	110	631,738	455,062	769,164	467,337	537,621.39	435,629
Chilean.....	4	17,899	12,685	23,547	13,434	15,856.25	10,277
Colombian.....	9	1,301	1,262	1,993	1,266	1,488.33	1,562
Danish.....	16	77,848	56,193	89,314	57,074	67,775.20	107,780
Danzig.....	2	16,448	14,136	24,350	13,948	14,756.28	15,248
Dutch.....	10	45,672	30,731	51,162	31,242	38,413.75	37,507
French.....	8	46,393	29,953	55,003	30,977	37,441.25	43,971
German.....	25	83,259	55,328	94,188	55,636	69,160.00	63,864
Italian.....	6	48,228	32,815	63,274	37,025	41,018.75	21,007
Japanese.....	21	107,923	89,385	134,770	87,112	111,233.30	138,886
Norwegian.....	33	162,739	112,974	187,553	112,692	128,205.14	127,513
Panamanian.....	3	7,036	3,675	6,710	4,123	4,564.40	3,867
Spanish.....	1					1,648.50	
Swedish.....	10	49,081	33,534	74,393	41,762	40,475.87	68,008
United States.....	194	993,137	755,543	1,232,985	754,448	900,631.97	929,078
Total, April, 1931.....	453	2,292,805	1,686,523	2,814,348	1,711,593	2,014,349.13	2,011,117
Total, April, 1930.....	489	2,479,096	1,849,804	3,075,488	1,872,024	2,232,763.00	2,456,782
Total, April, 1929.....	540	2,488,176	1,899,607	3,127,365	1,917,378	2,281,087.27	2,719,668

² Naval vessel of 3,297 displacement tons.

Forest Preserve.

In THE PANAMA CANAL RECORD for June 25, 1931, appeared an article, "Natural Timber Preserve Flanking Madden Road," wherein was described an area bordering the Madden Road from the north boundary of the Summit pasture to the boundary between the Canal Zone and Panama which had been set aside as a natural timber preserve by an order of the Governor issued June 14, 1930. In circular dated April 29, 1931, a detailed description of the land thus set aside is given in metes and bounds, and all circulars previously issued on the subject have been abrogated. The description refers to Drawing M-6101-73 and states:

Starting at a concrete monument (Marked "A") on the Canal Zone 5-mile boundary line, in latitude 9° 07' +4,221.0 feet and longitude 79° 37' +1,327.6 feet, said monument being N. 29° 20' W. a distance of 144.17 feet from the intersection of the Canal Zone 5-mile boundary line and the center line of the Madden Road;

Thence S. 29° 07' 34" W. a distance of 19,035.4 feet to a pipe monument (marked "B" on the map) located in the Cattle Industry fence, in latitude 9° 04' +5,734.8 feet and longitude 79° 38' +4,582.3 feet;

Thence following the Cattle Industry fence in an easterly and southerly direction a distance of 9,518.8 feet (through pipe monuments at all angles in the fence and through concrete monuments in the line of the fence on each side of the Madden Road) to a pipe monument (marked "C" on the map) in latitude 9° 04' +2,288.5 feet and longitude 79° 37' +2,283.4 feet, at a point where the Cattle Industry fence intersects the Pedro Miguel River;

Thence N. 31° 37' 37" E. a distance of 13,650.6 feet, to Canal Zone 5-mile boundary monument No. 70, in latitude 9° 06' +1,816.9 feet and longitude 79° 36' +1,136.4 feet;

Thence following the Canal Zone 5-mile boundary line to monument "A," the point of beginning.

The circular further provides that the tract of land described above is set aside as a "Forest Preserve" in order to conserve the jungle beauties for the benefit of the public. The Madden Road passes through this area in a northerly and southerly direction. No cultivations, beyond those now existing, will be permitted in this preserve. The cutting of timber, the trimming, injuring, or carrying away of any kind of trees, palms, or other plants in this area is prohibited. Offenders will be prosecuted under section 426 of the Penal Code of the Laws of the Canal Zone.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 2, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Ancon	Panama R. R. S. S. Line		April 26		602
Reina del Pacifico	Pacific Steam Navigation Co.		April 26		142
Tela	United Fruit Co.	April 26	April 26	60	222
Kreta	Hamburg-American Line	April 26	April 26	25	414
Santa Clara	Grace Line	April 27	April 27	244	135
Konigsberg	North German Lloyd	April 27	April 28	180	66
Flandre	French Line	April 27	April 29	62	426
Saramacca	United Fruit Co.	April 27	April 30	532	(²)
Duchess D'Aosta	Navigazione Libera Triestina	April 28	April 28	(¹)	64
Cellina	Navigazione Libera Triestina	April 28	April 28	(¹)	92
Pastores	United Fruit Co.	April 28	April 29	85	710
Anachucuna	A. Tagaropoulos	April 28	April 30	30	(²)
Acajutla	Pacific Steam Navigation Co.		April 29		543
Hokuroku Maru	Osaka Shosen Kaisha	April 29	April 29	132	22½
Iriona	United Fruit Co.	April 29	April 29	980	29
Metapan	United Fruit Co.	April 29	April 30	624	438
Nebraska	Royal Mail Steam Packet Co.	April 29	April 30	(¹)	108½
Heilo	Panama Mail S. S. Co.	April 29	May 2	462	(²)
Santa Barbara	Grace Line	April 30	April 30	282	259
Taketoyo Maru	Nippon Yusen Kaisha	April 30	April 30	114	25
San Jose	French Line	April 30	May 1	55	641
Timavo	Navigazione Libera Triestina	April 30	May 1	75	8
Erfurt	Hamburg-American Line	April 30	May 1	141	179
Helder	Royal Netherlands S. S. Co.	April 30	May 1	12½	236
Jason	Royal Netherlands S. S. Co.	April 30	May 1	257	172
Bogota	Colombian S. S. Line	April 30	May 1	105½	½
Orazio	Italian S. S. Line	April 30	May 2	13½	854
Cauca	National Navigation Co.		May 1		227
Jefferson Myers	States S. S. Co.	May 1	May 1	105	(²)
Ulua	United Fruit Co.	May 1	May 1	182	67
Tacoma	Hamburg-American Line	May 1	May 1	49	157
Geo. W. Barnes	Pan. American Petroleum Co.	May 1		9,740	
Invincible	Tampa Intercoast S. S. Co.	May 1	May 2	109	(²)
Cefalu	Standard Fruit & S. S. Co.	May 1	May 2	162	507
Oreoma	Pacific Steam Navigation Co.	May 1	May 2	96	2
Caldas	National Navigation Co.	May 1		192	
Laurits Swenson	Fred Olsen & Co.	May 1	May 2	511	(²)
Cali	Roland Line		May 2		155
Santa Inez	Grace Line	May 2	May 2	109	6
West Ivis	McCormick S. S. Line	May 2		23	
Gruncwald	Hamburg-American Line	May 2		23	
Margaret Johnson	Johnson S. S. Line	May 2	May 2	(¹)	200
Pollux	Anglo-Saxon Petroleum Co.	May 2		12,415	
Wichita	Roosevelt S. S. Co.	May 2		225	

¹ No cargo discharged. ² No cargo laded.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV. Balboa Heights, C. Z., May 13, 1931. No. 41.

Comparison of Canal Traffic in April, 1931, with April Traffic in Previous Years.

Commercial traffic through the Canal during the month of April, 1931, was the lowest April traffic with respect to the number of transits and net tonnage, Panama Canal measurement, since 1926, when 425 vessels, aggregating 2,048,247 net tons, were passed through, and the lowest cargo tonnage since 1925 when 1,950,902 long tons of cargo were transited.

In comparison with April, 1930, traffic for the past month declined 36 transits (7.4 per cent), 186,291 net tons (7.5 per cent), and 445,665 cargo tons (18.1 per cent), and in comparison with April, 1929, last month's traffic showed a decrease of 87 transits (16.1 per cent), 195,371 net tons (7.9 per cent), and 708,551 cargo tons (26.1 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of April each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of April.			Fiscal year.	Average per month for fiscal year.		
	Com- mercial transits.	Panama Canal net tonnage.	Tons of cargo.		Com- mercial transits.	Panama Canal net tonnage.	Tons of cargo.
1915	121	404,561	521,169	1915	102	361,197	465,567
1916	75	253,990	366,784	1916	63	199,687	257,843
1917	150	524,091	628,169	1917	150	483,213	538,213
1918	173	542,145	627,358	1918	172	547,839	627,669
1919	161	480,867	506,929	1919	169	510,416	576,335
1920	220	822,471	867,521	1920	206	712,170	781,208
1921	227	955,503	907,613	1921	241	931,323	966,601
1922	230	974,833	1,046,047	1922	228	931,455	907,075
1923	404	2,007,690	2,137,145	1923	331	1,550,482	1,630,656
1924	403	2,053,171	2,158,721	1924	435	2,179,073	2,249,559
1925	382	1,840,692	1,950,902	1925	389	1,904,596	1,996,570
1926	425	2,048,247	2,237,567	1926	433	2,064,549	2,169,787
1927	464	2,224,500	2,429,807	1927	456	2,135,651	2,312,351
1928	531	2,384,491	2,473,834	1928	538	2,454,886	2,469,226
1929	540	2,488,176	2,719,668	1929	534	2,468,483	2,555,250
1930	489	2,479,096	2,456,782	1930	515	2,498,335	2,502,519
1931	453	2,292,805	2,011,117	1931	470	2,334,884	2,139,837

¹ Canal opened August 15, 1914.

² Average for 10½ months.

³ Average for 10 months of fiscal year.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 6, 1931.

No. 879.

Colombia, Buenaventura, entrance buoy, light extinguished. The following message was received by the Hydrographic Office through the Captain of the Port:

Capt. C. Mantius, master of the Hamburg-American liner *Cerigo* reports that the red entrance buoy as well as buoy No. 7 at the port of Buenaventura are not burning.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, May 9, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.							Nature.	Tons.	Gross.	Net.
Rudby	2	19 05	3	6 15	3	12 53	3	13 50	British.	R. Ropner & Co.	390 0	55 0	13 6	Hartlepool, England	Ballast.	.....	5,988	4,305
City of Rayville	2	20 45	3	6 20	3	13 00	3	14 00	American.	Rosevelt S. S. Co., S. B.	401 9	54 2	21 0	New York, N. Y.	General.	1,800	7,007	5,941
Hawain	2	21 25	3	7 35	3	14 30	3	15 30	American.	Amer-Hawaiian Line	404 6	53 9	21 0	Boston, Mass.	General.	2,687	7,766	4,767
Atlantic Sun	2	21 30	3	7 15	3	14 55	3	15 55	American.	Sun Oil Co.	429 3	59 2	20 0	Tampa, Fla.	Ballast.	.....	7,763	5,283
Pat Doherty	3	4 10	3	8 35	3	15 17	3	16 35	American.	Richfield Oil Co.	430 0	59 2	19 0	New York, N. Y.	Ballast.	.....	7,773	5,634
Tashiro	3	5 10	3	8 45	3	17 08	3	18 23	American.	Nelson Line	324 0	46 0	12 4	San Francisco, Cal.	General.	3,205	3,984	2,628
Bonnaville	3	6 55	3	8 40	3	16 15	3	17 10	Norwegian.	Strange & Co.	388 3	54 0	12 4	New York, N. Y.	Ballast.	.....	6,050	5,036
West Iris	3	23 59	3	10 15	3	17 15	3	18 12	American.	Pac-Stg-Brazil Line	410 0	54 2	17 6	Monterey, Calif.	(⁵)	2,805	6,754	4,967
Tai Ping	3	6 10	3	14 35	3	21 43	3	22 01	German.	Hamburg-American Line	471 0	63 1	22 0	San Francisco, Cal.	General.	3,140	10,267	7,252
Ghost	3	14 55	3	15 30	3	22 01	3	23 31	Norwegian.	Barber Line	461 0	60 0	22 0	Vancouver, B. C.	General.	3,637	9,894	6,829
Sage Brush	3	19 30	3	19 40	4	9 11	4	10 18	American.	C. W. Witz	409 0	54 0	17 6	Manila, P. I.	General.	.....	.....	.....
Nautilus	.....	.....	.....	.....	.....	.....	.....	.....	American.	Shepard S. S. Co.	341 0	27 0	15 0	Seattle, Wash.	Ballast.	3,400	6,002	4,754
Charles R.	.....	.....	.....	.....	.....	.....	.....	.....	American.	U. S. Navy	.....	.....	.....	Balboa, C. Z.	Ballast.	.....	.....	.....
McCormick	3	19 55	4	6 15	4	15 06	4	16 15	American.	Munson McCor's Line	401 0	53 2	22 8	Philadelphia, Pa.	General.	5,100	7,082	5,167
Santa Clara	3	21 00	4	6 30	4	15 30	4	16 19	British.	Sir W. R. Smith & Sons	401 1	54 3	16 0	Hull, England	Ballast.	.....	6,784	5,107
Chickasaw	4	1 05	4	7 40	4	16 14	4	17 30	American.	Isthmian S. S. Lines	395 5	55 0	23 1	Baltimore, Md.	General, steel.	6,383	7,322	5,237
Flomar	4	6 35	4	8 20	4	16 52	4	20 25	American.	Calmar Line	410 0	54 2	20 1	Baltimore, Md.	General, steel.	4,921	6,604	4,655
Pegasus	4	5 35	4	11 10	4	17 49	4	18 56	Swedish.	Vacuum Oil Co.	480 0	65 0	20 0	Capetown, Africa	Ballast.	1,956	10,802	7,595
Lochkarine	3	18 45	4	11 40	4	18 06	5	1 47	British.	Royal Mail S. P. Co.	485 4	62 3	21 0	San Francisco, Cal.	General.	5,878	4,281	.....
Hindpool	4	4 20	4	12 30	4	20 55	4	22 35	British.	Sir R. Ropner & Co.	405 0	53 5	17 0	Naples, Italy.	Ballast.	2,042	7,145	5,474
Carl Legren	4	4 00	4	13 20	4	20 38	4	22 35	German.	Hamburg-American Line	499 8	53 9	18 7	Hamburg, Germany	General.	2,516	6,083	4,353
Venezuela	3	17 55	4	14 30	4	21 09	4	23 30	British.	Panama Mail S. S. Co.	380 0	48 7	21 5	New York, N. Y.	General.	2,516	6,854	5,130
Yearby	4	12 35	4	14 50	4	22 09	4	23 30	British.	Sir R. Ropner & Co.	435 0	55 5	17 0	Liverpool, England	Ballast.	7,069	7,396	5,588
Asia	4	11 30	4	19 50	5	9 00	5	10 10	Danish.	East Asiatic Co.	425 0	55 0	25 0	Copenhagen, Den.	(⁶)	.....	.....	.....
Canadian	4	23 45	5	6 12	5	13 20	5	14 30	British.	Can. Nat. Steamships	430 0	56 0	23 0	Halifax, N. S.	General.	2,543	7,080	5,518
Cruiser	5	9 10	5	9 25	5	15 59	5	17 00	Japanese.	Osaka Shosen Kaisha	445 0	60 0	25 7	Batavia, N. I.	General, iron.	5,950	8,982	6,274
Tokai Maru	5	12 10	5	12 20	5	19 19	5	22 45	Norwegian.	Ugo-Saxon Pet. Co.	473 6	64 5	19 6	Los Angeles, Calif.	Ballast.	9,626	6,839	.....
Langanger	5	12 10	5	12 20	5	19 19	5	22 45	Norwegian.	Ugo-Saxon Pet. Co.	473 6	64 5	19 6	Los Angeles, Calif.	Ballast.	9,626	6,839	.....
Gen. G. W.	.....	.....	.....	.....	.....	.....	.....	.....	American.	S. S. Army	.....	.....	.....	Balboa, C. Z.	(⁷)	.....	.....	.....
Getty	6	5 55	6	6 20	6	13 37	6	14 50	American.	Standard Oil Co.	480 5	66 0	19 6	New York, N. Y.	Ballast.	.....	9,820	6,750
Comet	6	2 35	6	7 55	6	14 40	6	16 00	Swedish.	Ore S. S. Corp.	561 10	72 2	23 0	Cruz Grande, Chile	Ballast.	15,425	4,421	.....
Svealand	6	2 35	6	7 55	6	14 40	6	16 00	Swedish.	Ore S. S. Corp.	561 10	72 2	23 0	Cruz Grande, Chile	Ballast.	15,425	4,421	.....
Robert	6	7 25	6	8 30	6	16 21	6	17 15	American.	Luckenbach Line	446 0	58 0	22 6	Boston, Mass.	General.	5,340	8,695	6,375
Luckenbach	6	7 25	6	8 30	6	16 21	6	17 15	American.	Luckenbach Line	446 0	58 0	22 6	Boston, Mass.	General.	5,340	8,695	6,375

⁴ Tug.⁵ Sea sled.⁶ Motor ship.⁷ Towing barge.⁸ General, coffee, bones, and cocoa.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Salt Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Draft.			Nature.	Tons.	
American.....	4	23.00	5	8.32	5	15.40	5	15.40	American	404.6	53.9	26.0	Portland, Ore.	General	5,625	4,761
Dorothy.....	5	6.20	5	9.04	5	16.55	5	16.55	American	448.9	60.2	29.0	Portland, Ore.	Lumber, general	9,000	9,294
Luckenbach.....	5	8.50	5	9.53	5	17.35	5	17.35	Dutch	202.9	33.1	14.0	Buenaventura, Col.	Lumber, general	3,775	6,861
Baralt.....	5	11.10	5	6.27	6	13.25	6	13.25	American	360.2	51.6	23.0	Panama Mail S. S. Co.	General	3,086	5,182
El Salvador.....	5	19.50	6	6.34	6	14.20	6	14.20	American	431.0	59.2	26.0	Tidewater Oil Co.	Gasoline	10,500	7,863
Betterton ¹	5	16.20	6	7.15	6	15.30	6	15.30	British	385.6	51.6	27.0	Donaldson Brothers.	Gasoline	5,569	5,104
Moveria ¹⁴	5	17.30	6	7.50	6	15.45	6	15.45	American	251.0	43.6	21.0	Vancouver, B. C.	General	2,888	4,724
Onondaga.....	5	17.30	6	7.50	6	15.45	6	15.45	American	251.0	43.6	21.0	Aberdeen, Wash.	General	2,888	4,724
Salvador.....	6	10.05	6	10.47	6	17.20	6	17.20	British	215.0	33.5	13.0	Champerico, Guat	General	296	1,621
Standard.....	6	14.10	6	14.59	6	23.15	6	23.15	American	467.6	62.7	29.0	Los Angeles, Calif	Gas oil	12,487	7,735
Arrow ¹	6	16.10	6	17.18	7	11.35	7	11.35	American	402.6	53.0	28.0	Portland, Ore.	Lumber, copper	8,100	6,575
Gen. M. H. Sherman.....	6	23.30	7	6.40	7	13.55	7	13.55	British	405.1	63.1	25.0	Baltimore, Md	Frozen, general	5,317	4,912
Cornwall.....	7	6.55	7	6.55	7	15.00	7	15.00	American	231.0	20.0		London, England			
S-11 ²⁵	7	6.55	7	6.55	7	15.00	7	15.00	American	231.0	20.0		Cristobal, C. Z.			
S-13 ²⁵	7	7.10	7	7.10	7	15.00	7	15.00	American	231.0	20.0		Cristobal, C. Z.			
Chevink ¹⁶	7	7.10	7	7.10	7	15.00	7	15.00	American	231.0	20.0		Cristobal, C. Z.			
S-48 ²⁵	7	7.15	7	7.15	7	15.00	7	15.00	American	231.0	20.0		Cristobal, C. Z.			
Benroch.....	7	7.40	7	7.40	7	15.30	7	15.30	British	420.0	54.0	19.0	Bahama, C. Z.	Ballast	5,300	6,425
Sabros.....	7	9.00	7	9.51	7	18.20	8	10.25	American	477.1	60.0	29.0	Dunkirk, France	Fuel oil	10,943	4,068
Pennsylvania ¹	7	11.50	7	12.45	7	19.55	8	4.30	American	416.8	56.1	23.0	Cristobal, C. Z.	Gasoline	8,000	6,756
Port Brisbane.....	7	17.25	7	18.50	8	11.10	8	16.15	British	480.7	62.4	29.0	Port Arthur, Tex.	Frozen, general	8,306	7,984
Hendonhall.....	7	17.40	7	19.05	8	11.55	8	12.15	British	389.6	53.0	26.0	Glasgow, Scotland		8,034	5,852
Montana.....	7	18.00	8	8.59	8	14.00	8	14.00	British	404.6	53.9	23.0	Wilmington, N. C.	General	5,191	4,775
Fernwood ¹⁴	7	18.15	8	6.44	8	17.15	8	17.15	Norwegian	390.5	55.2	26.0	Boston, Mass.	Rice	7,750	6,849
Alabam.....	8	4.00	8	7.15	8	16.00	9	00.20	Norwegian	435.7	56.2	27.0	Habana, Cuba	General	7,247	5,593
Bassode.....	8	8.00	8	9.00	8	17.05	8	17.05	French	350.2	52.5	23.0	Oslo, Norway	Copra, general	4,440	5,304
Pacific.....	8	15.00	8	19.35	9	11.35	9	11.35	British	420.0	58.0	27.0	Marseilles, France	General	8,470	7,892
Slipper ¹⁴	8	16.45	9	6.29	9	14.10	9	14.10	American	440.6	66.0	30.0	Manchester, Eng.	Gasoline	13,206	9,607
Western Sun ¹⁴	9	7.00	9	8.28	9	15.45	9	15.45	Norwegian	482.7	58.8	26.2	Marcus Hook, Pa.	Gasoline	10,161	7,539
Morgenst.....	9	9.21	9	10.45	9	17.43	9	17.43	German	216.5	32.9	13.3	Lands End, Eng. ¹⁷	General	536	1,132
Marzales.....	9	9.21	9	10.45	9	17.43	9	17.43	German	216.5	32.9	13.3	Cristobal, C. Z.	General	536	1,132
Democracy.....	9	22.30	9	14.49	9	21.40	9	21.40	American	377.0	52.0	24.0	New York, N. Y.	Lumber, general	5,500	5,434
Cauca ¹	9	15.30	9	16.14	10	10.50	10	10.50	Colombian	107.0	22.9	10.0	Cristobal, C. Z.	Coffee, general	147	262

¹ Tanker.¹⁴ Motor ship.¹⁵ Submarine.¹⁶ Tug.¹⁷ For orders.¹⁸ Cacao, lagoon, and coffee.¹⁹ Lumber and automobile parts.²⁰ Wheat, wool, and tallow.²¹ Nitrates and automobile parts.²² All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.		
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.
May 3.....	Iriona.....	United Fruit Co.....	Port Limon, Costa Rica.	May 3.....	Inapaquina ²²	A. Tagaropulos.....
May 3.....	Darien.....	A. Tagaropulos.....	Colon, Rep. of Panama.	May 3.....	Gruewald.....	Hamburg-American Line.....
May 4.....	Dapten C-35 ²³	Seadco Airplane Co.....	Barraquilla via wayp'ls.	May 3.....	No. 9694 ²³	Pan American Airways.....
May 5.....	Crynsen.....	Royal Netherlands S. S. Co.....	Hamburg via wayports.	May 3.....	No. 669-M ²³	Pan American-Grace Airways.....
May 5.....	Metapan.....	United Fruit Co.....	Cartagena, Colombia.	May 3.....	No. 300-N ²³	Pimentel via wayports.
May 5.....	No. 300-N ²³	Pan American-Grace Airways.....	Pimentel via wayports.	May 3.....	Iriona.....	United Fruit Co.....
May 5.....	Pearl Marie ²⁴	G. I. Bryan.....	Colon, Rep. of Panama.	May 3.....	George W. Barnes.....	Pan-American Pet. & Trans. Co.
May 5.....	Anachucuna ²²	A. Tagaropulos.....	Colon, Rep. of Panama.	May 5.....	Pollux.....	Anglo-Saxon Petroleum Co.
May 5.....	Cristobal.....	Panama R. S. S. Line.....	New York via Haiti.	May 5.....	Pearl Marie ²⁴	G. I. Bryan.....
May 6.....	Rugia.....	Hamburg-American Line.....	Hamburg via wayports.	May 5.....	Anachucuna ²²	A. Tagaropulos.....
May 6.....	Sixola.....	United Fruit Co.....	New York via Kingston.	May 6.....	No. 9685 ²³	Pan American Airways.....
May 6.....	Tela.....	United Fruit Co.....	New Orleans via wayports.	May 6.....	No. 668-M ²³	Pan American Airways.....
May 6.....	No. 670-M ²³	Pan American Airways.....	New Orleans via wayports.	May 6.....	Metapan.....	United Fruit Co.....
May 6.....	No. 9688 ²³	Pan American Airways.....	Miami via wayports.	May 6.....	Crynsen.....	Royal Netherlands S. S. Co.
May 7.....	Cayana.....	Elders & Wyffels, Ltd.....	San Salvador and wayp'ls.	May 6.....	Inapaquina ²²	A. Tagaropulos.....
May 8.....	Calamares.....	United Fruit Co.....	Arromouth via wayports.	May 7.....	Sixola.....	United Fruit Co.....
May 8.....	Crynsen.....	Standard Fruit & S. S. Co.....	New Orleans, La.	May 7.....	Rugia.....	Hamburg-American Line.....
May 8.....	Tillie Lykes.....	Royal Netherlands S. S. Co.....	New York via Habana.	May 7.....	Tela.....	United Fruit Co.....
May 8.....	Amelia I. ²⁴	P. W. Hamilton.....	Port Limon, Costa Rica.	May 8.....	Cayana.....	Elders & Wyffels, Ltd.....
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	New York via wayports.	May 8.....	Calamares.....	Pan American-Grace Airways.....
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Galveston, Tex.	May 8.....	No. 300-N ²³	Pimentel via wayports.
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Colon, Rep. of Panama.	May 8.....	Darien C-35 ²³	Seadco Airplane Co.....
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Colon, Rep. of Panama.	May 9.....	Crynsen.....	Standard Fruit & S. S. Co.
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Pimentel via wayports.	May 9.....	Confessa.....	Royal Netherlands S. S. Co.
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Miami via wayports.	May 9.....	Martinique.....	Colonian S. S. Line.....
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Miami via wayports.	May 9.....	Carandilla ²⁴	Standard Fruit & S. S. Co.
May 9.....	Amelia I. ²⁴	Lykes Brothers S. S. Co.....	Miami via wayports.	May 9.....	Amelia I. ²⁴	P. W. Hamilton.....

²² Motor boat. ²³ Air mail carrier. ²⁴ Motor schooner.

PORT OF BALBOA.

* ARRIVALS.				* DEPARTURES.		
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.
May 5.....	Real ²⁵	Haus Elliot.....	Panama Bay, R. P.	May 5.....	Real ²⁵	Haus Elliot.....
May 6.....	Sun Mateo.....	United Fruit Co.....	San Francisco, Calif.	May 7.....	Sun Mateo.....	United Fruit Co.....

²⁵ Motor schooner. * Other than ships passing through the Canal.Panama Bay, R. P.
San Francisco, Calif.

"President Jackson" Transits Canal in New Service.

The passenger and freight steamship *President Jackson* of the Dollar Steamship Line transited the Canal May 3, 1931, en route from Manila to New York, via Hong Kong, Shanghai, Kobe, Yokohama, Honolulu, San Francisco, and Los Angeles, inaugurating a new fortnightly service of the company over this route. This new service will in no way affect the present around-the-world service westbound which has been operating for over seven years. The combined services will provide a weekly sailing from New York to the Far East, via the Canal, California ports, and Honolulu, alternating vessels continuing around the world as in the past and the others turning around at Manila and returning to New York over the route taken by the *President Jackson*, as above. The new layout gives four transits westbound through the Canal per month and two eastbound.

The *President Hoover* and *President Coolidge*, under construction for this company, will be added to the new service upon completion. The former is to sail from New York on her maiden voyage in August and be followed by the *President Coolidge* in October.

Calmar Line Increases Sailings.

The Calmar Line, operator of a fleet of freight steamers in the United States intercoastal trade, is reported to have increased its sailings from every two weeks to every nine days, effective with the sailing of its vessel from Philadelphia on April 15. The report states that the new schedule of the line will provide express service from Philadelphia to Los Angeles, San Francisco, Oakland, Portland, and Seattle. Twelve freighters are to be used in the service, with an average speed of 11.5 knots.

Correction.

In issue of THE PANAMA CANAL RECORD for May 6, 1931, page 579, in an article captioned "Forest Preserve," reference was made to an article, "Natural Timber Preserve Flanking Madden Road" said to have appeared in THE PANAMA CANAL RECORD of June 25, 1931. This date should have been June 25, 1930.

Tanker Traffic Through the Panama Canal in April, 1931.

During the month of April, 1931, 69 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 403,726, on which tolls of \$363,672.41 were paid. Cargo amounted to 419,797 tons, which included 381,647 tons of mineral oils, 19,000 tons of whale oil, 12,600 tons of molasses, and 6,550 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 18.8 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 13.3 per cent.

Tank ships comprised 15.2 per cent of the total commercial transits through the Canal during the month; made up 17.6 per cent of the total Panama Canal net tonnage; were the source of 18.1 per cent of the tolls collected; and carried 20.9 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of April, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for April, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	5	31,275	\$25,806.91	16,767
Danzig.....	1	8,224	5,921.28	
Norwegian.....	6	33,835	24,361.20	
United States.....	19	103,189	75,736.08	
Total, April, 1931.....	31	178,523	131,825.47	16,767
Total, March, 1931.....	35	193,420	144,362.80	9,382
Total, February, 1931.....	31	173,451	126,407.49	8,327
Total, April, 1930.....	39	213,878	162,405.20	28,454
<i>Pacific to Atlantic.</i>				
British.....	10	56,795	60,436.74	* 98,616
Danish.....	1	6,024	6,295.00	12,428
Danzig.....	1	8,224	8,835.00	15,248
French.....	1	4,962	5,471.25	8,963
German.....	1	4,169	4,282.50	7,089
Norwegian.....	3	22,769	22,346.25	* 39,118
United States.....	21	122,260	124,180.20	* 221,568
Total, April, 1931.....	38	225,203	231,846.94	403,030
Total, March, 1931.....	30	168,520	168,110.98	293,411
Total, February, 1931.....	29	160,941	168,039.88	293,328
Total, April, 1930.....	46	264,438	264,724.95	455,872

* Includes 12,600 tons of molasses. * Includes 19,000 tons of whale oil. * Includes 6,550 tons of coconut oil.

The following tabulation shows the tanker traffic through the Canal during April, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	18	100,236	\$72,169.92	
United States to South America.....	3	21,928	15,788.16	
Cristobal to United States.....	1	4,953	3,566.16	
West Indies to South America.....	1	4,350	4,483.75	7,584
West Indies to Balboa.....	1	4,997	5,535.00	9,183
Europe to United States.....	6	33,835	24,361.20	
Europe to South America.....	1	8,224	5,921.28	
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	19	110,023	111,532.70	198,587
United States to Cristobal.....	1	4,953	5,410.00	10,029
United States to West Indies.....	1	5,312	5,598.75	9,901
United States to Europe.....	8	41,946	45,692.65	73,497
South America to United States.....	1	4,326	4,633.75	8,001
South America to Canada.....	3	23,626	25,346.25	49,617
South America to Europe.....	1	8,224	8,835.00	15,248
Balboa to West Indies.....	1	4,997	3,597.84	
Hawaiian Islands to Europe.....	1	6,379	6,612.50	* 12,600
Australasia to United States.....	1	11,790	10,661.25	* 19,000
Philippine Islands to United States.....	1	3,627	3,926.25	* 6,550

* Molasses. * Whale oil. * Coconut oil.

Of the tanker traffic passing through the Canal in April, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for April, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
April, 1931.....	24	134,042	\$96,510.24	.....
March, 1931.....	26	146,574	107,033.60	3,000
February, 1931.....	25	137,361	98,899.92	.....
April, 1930.....	29	160,376	116,391.53	300
<i>From Los Angeles.</i>				
April, 1931.....	26	147,531	152,761.60	266,202
March, 1931.....	20	115,950	115,424.75	199,722
February, 1931.....	23	128,221	134,310.20	239,521
April, 1930.....	33	181,662	182,359.75	321,197

Visits of Groups of Tourists to Locks.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 4, 1931.

TO ALL STEAMSHIP AGENTS:

1. On occasions during the tourist season when large numbers of passengers are escorted in groups to Gatun Locks, it has been found to be practically impossible to keep them from approaching dangerously near the lock chambers, notwithstanding warning signs posted in conspicuous places and the efforts of the police. No accidents have occurred in the past, but there is always the possibility of a serious mishap while this condition exists. Erection of a guard rail has been found to be impracticable, as an adjunct of this kind built close to the edge of the lock wall would interfere with the cables from the towing locomotives to ships in the lock, and if built back of the towing tracks would prevent tourists from viewing closely the operation of the locks and also interfere with the free circulation of the operating forces and those having business with the locks.

2. The Canal authorities are pleased to have tourists view the locks, but can not permit their visits to interfere with the prompt and efficient handling of Canal traffic, which is and must be the first consideration.

3. It is desired to call attention to the fact that the duty of protecting tourist parties at the locks rests with the steamship companies or tourist agencies taking the tourists to the locks, and due care should be exercised at all times in providing a sufficient number of guides to safeguard their charges.

H. BURGESS,
Governor.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 2, 1931.

No. 875.

Nicaragua, Corinto Harbor, decreased depth reported, information concerning buoys.
The following is quoted from Daily Memorandum No. 6911, dated Washington, D. C., April 22, 1931:

The commanding officer of the U. S. S. *Rochester* reports the existence of a shoal about 25 yards in extent, having a least depth of 24 feet, in latitude 12° 28' 03" N., longitude 87° 13' 25" W., where a depth of 26 feet is shown on H. O. Chart No. 2604.

The commanding officer also reports the following changes in buoyage:

Light Buoy No. 2 is moored 400 yards 304° from Cardon Head light; Buoy No. 5 was replaced on April 7, 1931, at a point 300 yards 72° 15' from Cardon Head light, in 29 feet of water; Buoy No. 18 has been replaced in 24 feet of water, 550 yards 95° 30' from the dock light.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 12, 1931.

No. 885.

REVISION OF NOTICE TO MARINERS No. 883.¹

Colombia, west coast, Buenaventura, Isla Palmas, change in characteristic of light.
The captain of the S. S. *Manizales* reports the characteristic of Isla Palmas Light has been changed from 2 flashes to 1 flash. Observed May 6 and May 7, 1931.

Characteristics: White flash; 0.5 sec. light, 8.5 sec. eclipse, period 9 sec.

Isla Palmas: Longitude 3° 53' 28" N., latitude 77° 22' 12" W.

H. BURGESS,
Governor.

¹Notice to Mariners No. 883 was not published in THE PANAMA CANAL RECORD.

Commercial Traffic Through the Panama Canal in April, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of April, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for April, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	65	358,028	271,960	440,837	273,283	\$310,454.77	180,774
Europe to Canada:							
British.....	18	86,140	62,828	102,049	62,797	64,784.02	5,312
Danish.....	2	10,963	9,456	13,556	9,446	9,353.95	6,197
Dutch.....	2	13,679	10,642	16,989	10,604	13,302.50	5,554
French.....	1	7,027	3,873	8,061	4,295	4,841.25	1,676
German.....	1	6,387	3,728	6,757	4,027	4,660.00	2,868
Italian.....	1	9,856	7,927	12,951	8,025	9,908.75	653
Norwegian.....	1	6,140	5,261	8,516	5,341	6,576.25	5,562
Swedish.....	1	5,661	3,406	5,642	4,320	4,257.50	2,428
United States.....	1	4,659	3,879	6,236	3,902	3,354.48	.....
Total.....	28	150,512	111,000	180,757	112,757	121,038.70	30,250
United States to South America:							
British.....	3	21,928	18,948	34,218	19,633	15,788.16	.....
Chilean.....	3	13,194	9,219	16,237	9,458	11,523.75	5,471
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	3,000
Swedish.....	1	4,496	3,743	15,337	4,385	3,237.12	.....
United States.....	12	54,399	40,927	74,704	40,835	44,515.75	18,202
Total.....	20	98,484	75,527	144,969	77,048	78,427.28	26,673
United States to Far East:							
British.....	3	18,000	9,870	17,319	9,611	12,337.50	13,309
Danish.....	1	5,500	3,081	5,038	3,155	3,851.25	7,285
Japanese.....	10	50,368	41,461	62,686	40,505	51,662.05	62,086
Norwegian.....	2	9,397	5,096	8,560	5,123	6,370.00	9,253
Panamanian.....	1	6,967	3,610	6,604	4,057	4,512.50	3,867
United States.....	3	16,137	10,765	17,610	10,773	13,456.25	20,862
Total.....	20	106,369	73,883	117,817	73,224	92,189.55	116,662
Europe to United States:							
British.....	3	14,071	10,458	16,844	10,520	10,131.12	.....
German.....	2	13,000	8,666	14,668	8,919	10,832.50	7,063
Norwegian.....	9	47,015	36,311	59,979	36,055	33,595.41	.....
Swedish.....	1	5,384	3,455	5,750	4,226	4,318.75	5,600
Total.....	15	79,470	58,890	97,241	59,720	58,877.78	12,663
Europe to Australasia:							
British.....	11	91,619	64,713	107,155	66,345	78,560.44	20,977
French.....	1	5,633	4,305	7,138	4,380	5,381.25	1,700
Swedish.....	1	5,122	3,129	5,293	4,046	3,911.25	588
Total.....	13	102,374	72,147	119,586	74,771	87,852.94	23,265
Europe to South America:							
British.....	2	18,190	13,065	24,372	14,796	16,331.25	9,323
Danzig.....	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch.....	2	9,640	5,431	9,243	5,630	6,788.75	3,520
French.....	1	4,834	3,223	5,390	3,219	4,028.75	1,274
German.....	4	19,730	13,342	21,756	13,067	16,677.50	7,682
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,724
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	4,252
Total.....	12	71,931	50,682	89,980	52,845	60,438.78	27,775
Cristobal, C. Z. to South America:							
Colombian.....	4	607	599	906	607	720.85	785
Dutch.....	1	242	294	780	323	367.50	141
German.....	4	3,491	2,260	4,347	2,334	2,825.00	858
Total.....	9	4,340	3,153	6,033	3,264	3,913.35	1,784

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Philippine Islands:							
British.....	4	23,141	14,136	24,821	14,535	\$17,670.00	18,822
United States.....	2	11,343	7,967	11,503	7,017	9,958.75	13,428
Total.....	6	34,484	22,103	36,324	21,552	27,628.75	32,250
United States to Canada:							
British.....	1	4,665	3,862	6,221	3,889	3,358.80	.....
Norwegian.....	1	4,663	2,490	4,258	2,490	3,112.50	.....
United States.....	3	14,098	10,311	16,561	10,312	12,888.75	17,659
Total.....	5	23,426	16,663	27,040	16,691	19,360.05	17,659
Cristobal, C. Z. to United States:							
United States.....	5	14,022	12,489	20,433	12,438	11,040.44	370
United States to Australasia:							
British.....	3	19,535	12,173	19,689	12,195	15,216.25	8,766
United States.....	1	5,002	3,670	5,867	3,660	4,587.50	2,513
Total.....	4	24,537	15,843	25,556	15,855	19,803.75	11,279
Cristobal, C. Z. to Central America:							
British.....	3	2,147	1,924	3,468	1,958	2,405.00	2,104
Norwegian.....	1	722	579	990	509	519.84	.....
Total.....	4	2,869	2,503	4,458	2,527	2,924.84	2,104
West Indies to United States:							
British.....	1	4,838	3,592	5,643	3,615	4,490.00	5,000
Norwegian.....	1	5,131	2,829	4,819	2,829	3,536.25	.....
United States.....	1	86	84	123	84	63.00	.....
Total.....	3	10,055	6,505	10,585	6,528	8,089.25	5,000
Canadian Intercoastal:							
British.....	3	12,858	8,400	17,990	9,935	10,500.00	2,201
Around-the-World:							
United States.....	3	30,518	23,932	40,237	23,907	29,915.00	9,885
Foreign vessels without cargo—							
U. S. intercoastal:							
Norwegian.....	2	6,887	4,779	8,015	4,759	4,958.64	.....
South America to United States:							
United States.....	2	7,652	4,896	8,038	4,898	6,120.00	4,061
Central American intercoastal:							
Colombian.....	1	124	113	207	109	141.25	200
Danish.....	1	1,879	1,144	1,909	1,172	1,430.00	1,974
Total.....	2	2,003	1,257	2,116	1,281	1,571.25	2,174
Europe to Central America:							
German.....	2	4,629	2,725	4,718	2,710	3,406.25	4,060
United States to Hawaii:							
United States.....	1	2,119	1,669	2,848	1,642	2,086.25	3,504
United States to Central America:							
United States.....	1	1,549	1,167	1,974	1,161	1,115.28	.....
Central America to United States:							
United States.....	1	2,329	1,890	3,203	1,884	2,362.50	737
Canada to Australasia:							
British.....	1	4,195	3,355	5,493	3,347	4,193.75	3,028
South America to Canada:							
Norwegian.....	1	5,260	2,881	4,877	2,994	3,601.25	2,890
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,040
West Indies to Canada:							
British.....	1	4,118	3,206	5,038	3,187	4,007.50	6,000
West Indies to South America:							
British.....	1	4,350	3,587	5,890	3,611	4,483.75	7,584
West Indies to Central America:							
British.....	1	65	58	109	65	72.50	60
West Indies to Balboa, C. Z.:							
British.....	1	4,997	4,428	7,519	4,342	5,535.00	9,183
Europe to Hawaii:							
Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	6,694

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Cristobal, C. Z. to Balboa, C. Z.: United States.....	1	32	32	(¹)	(¹)	\$38.40	.....
Grand total, April, 1931.....	235	1,185,143	868,561	1,451,908	880,283	994,696.30	553,609
Grand total, April, 1930.....	240	1,226,284	910,658	1,511,780	917,996	1,061,309.99	806,119
Grand total, April, 1929.....	259	1,190,510	907,312	1,479,562	911,498 ¹	1,046,690.90	862,450

¹ Barge having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal: United States.....	61	345,867	262,403	421,527	261,458	\$327,716.45	455,761
Canada to Europe:							
Belgian.....	1	4,103	3,247	5,942	3,607	4,058.75	6,920
British.....	12	67,502	46,508	75,422	46,652	58,135.00	94,812
Danish.....	3	19,080	15,134	23,673	15,635	18,917.50	28,024
Dutch.....	1	8,266	6,197	10,220	6,385	7,746.25	9,968
French.....	3	19,083	10,951	22,004	11,869	13,688.75	21,773
German.....	2	13,010	7,820	13,912	8,245	9,775.00	15,862
Italian.....	2	12,154	8,975	14,933	9,413	11,218.75	15,796
Norwegian.....	5	24,748	15,992	26,197	16,143	19,990.00	36,745
Swedish.....	2	9,685	6,799	11,449	8,432	8,498.75	16,126
United States.....	2	11,612	7,837	12,560	7,771	9,796.25	16,535
Total.....	33	189,243	129,460	216,312	134,152	161,825.00	262,561
South America to United States:							
British.....	5	19,066	14,253	23,159	14,252	17,039.61	30,753
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	4,806
Danish.....	3	14,250	8,282	13,724	8,326	10,352.50	23,900
Swedish.....	1	4,421	3,743	5,339	4,377	4,678.75	22,146
United States.....	10	42,297	33,272	60,804	33,214	41,076.90	90,033
Total.....	20	84,739	63,016	120,336	64,145	77,480.26	171,638
Philippine Islands to United States:							
Danish.....	2	6,576	5,080	8,429	5,184	6,350.00	11,414
Japanese.....	7	34,809	29,118	42,223	27,869	36,231.25	55,592
Norwegian.....	2	11,609	6,474	10,865	6,566	8,092.50	13,866
United States.....	4	21,525	19,084	27,386	18,992	23,855.00	34,637
Total.....	15	74,519	59,756	88,903	58,611	74,528.75	115,509
South America to Europe:							
British.....	3	14,421	11,802	19,495	11,884	14,752.50	15,218
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,248
Dutch.....	3	13,103	7,873	13,150	7,977	9,841.25	17,774
French.....	1	4,854	3,224	5,399	3,225	4,030.00	8,585
German.....	2	10,480	7,827	12,164	7,399	9,783.75	14,103
Italian.....	2	18,702	10,399	23,387	13,529	12,998.75	2,834
Japanese.....	1	4,400	4,358	5,864	4,259	5,280.00	7,640
Swedish.....	1	3,967	3,072	5,065	4,065	3,840.00	6,915
Total.....	14	78,151	55,623	96,699	59,312	69,361.25	88,317
Australasia to Europe:							
British.....	12	100,563	69,461	114,718	71,087	86,826.25	67,827
United States to Europe:							
British.....	5	23,491	21,316	32,688	21,290	26,541.40	40,826
French.....	1	4,962	4,377	7,011	3,989	5,471.25	8,963
German.....	1	4,169	3,426	5,978	3,368	4,282.50	7,089
Norwegian.....	2	9,379	7,951	13,193	7,885	9,938.75	15,832
Swedish.....	1	5,485	3,406	5,558	4,246	4,257.50	7,511
United States.....	1	8,619	7,026	11,247	6,953	8,782.50	15,365
Total.....	11	56,105	47,502	75,675	47,731	59,273.90	95,586
South America to Cristobal, C. Z.:							
Colombian.....	3	446	437	673	441	536.95	577
Dutch.....	1	742	294	780	323	367.50	550
German.....	5	4,189	2,878	5,370	2,950	3,597.50	2,734
Total.....	9	5,377	3,609	6,823	3,714	4,501.95	3,861

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Central America to Cristobal, C. Z.:							
British.....	2	1,441	1,286	2,298	1,304	\$1,607.50	599
Colombian.....	1	124	113	207	109	89.28	
Norwegian.....	1	722	579	990	569	723.75	440
United States.....	2	2,515	1,874	3,283	1,852	2,154.27	519
Total.....	6	4,802	3,852	6,778	3,834	4,574.80	1,558
United States to Cristobal, C. Z.:							
United States.....	5	14,210	12,411	20,408	12,443	15,460.70	13,136
Hawaii to United States:							
United States.....	3	15,817	10,385	16,898	10,355	12,981.25	24,227
South America to Canada:							
British.....	2	17,602	15,241	28,377	15,913	19,051.25	37,189
Danish.....	1	6,024	5,036	8,278	5,064	6,295.00	12,428
Total.....	3	23,626	20,277	36,655	20,977	25,346.25	49,617
Balboa, C. Z. to Cristobal, C. Z.:							
Panamanian.....	2	69	65	106	66	51.90	
United States.....	1	20	20	20	20	15.00	
Total.....	3	89	85	126	86	66.90	
South American interoceanic:							
German.....	1	1,837	1,295	2,159	1,263	1,618.75	570
United States.....	1	1,049	728	728	728	755.28	
Total.....	2	2,886	2,023	2,887	1,991	2,374.03	570
Canadian interoceanic:							
British.....	2	8,259	6,580	10,921	6,711	8,225.00	12,196
United States to South America:							
United States.....	2	7,633	4,865	7,950	4,861	6,081.25	6,870
Australasia to United States:							
Norwegian.....	2	16,826	11,328	19,027	10,921	14,160.00	26,373
Australasia to Canada:							
British.....	2	8,516	6,534	10,862	6,602	8,167.50	3,939
Far East to United States:							
Japanese.....	2	12,525	10,278	16,730	10,092	12,847.50	10,528
Far East to Europe:							
British.....	1	5,487	2,974	4,749	2,876	3,717.50	5,450
Danish.....	1	4,418	3,585	5,702	3,583	4,481.25	7,908
Total.....	2	9,905	6,559	10,451	6,459	8,198.75	13,358
Foreign vessels without cargo— U. S. interoceanic:							
Spanish.....	1					1,648.50	
Canada to United States:							
Danish.....	1	4,691	2,705	4,532	2,772	3,381.25	5,650
United States to West Indies:							
Norwegian.....	1	5,312	4,479	7,342	4,253	5,598.75	9,901
United States to India:							
British.....	1	4,681	2,650	4,345	2,637	3,312.50	2,551
Canada to South America:							
Norwegian.....	1	5,131	2,906	4,884	3,004	3,632.50	2,399
Central America to Europe:							
German.....	1	2,337	1,361	2,359	1,354	1,701.25	975
Hawaii to Europe:							
British.....	1	6,379	5,290	8,940	5,229	6,612.50	12,600
Balboa, C. Z. to West Indies:							
British.....	1	4,997	4,428	7,519	4,342	3,597.84	
Around-the-world:							
British.....	1	14,476	8,136	21,833	12,177	10,170.00	
Grand total, April, 1931.....	218	1,107,662	817,962	1,362,440	831,310	1,019,652.83	1,457,508
Grand total, April, 1930.....	249	1,252,812	939,146	1,563,708	954,028	1,171,453.01	1,650,663
Grand total, April, 1929.....	281	1,297,666	992,295	1,647,803	1,005,880	1,234,396.37	1,857,218

¹ Naval vessel of 3,297 displacement tons.

Cable address of The Panama Canal.

The cable address of The Panama Canal, on the Isthmus, is "Pancanal, Panama;" in the United States, "Pancanal, Washington."

United States Intercoastal Traffic by Commodities for April, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for April, 1931, and the totals for April, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	1,019		1,019
Alfalfa.....		789	789
Alfalfa meal.....		1,574	1,574
Ammonia.....	144		144
Asbestos.....	29		29
Asphalt.....	84	140	224
Automobiles.....	5,296	196	5,492
Automobile accessories.....	3,033	77	3,110
Bamboo.....		119	119
Bark.....		243	243
Barley.....		50	50
Beans.....	106	4,456	4,562
Borax.....		538	538
Bran.....		834	834
Bricks.....	218		218
Burlap.....	249	223	472
Calcium carbide.....	197		197
Camphor.....		58	58
Canned:			
Fish.....	399	5,865	6,264
Fruit.....	944	11,879	15,823
Meat.....	260	43	303
Milk.....		127	127
Soup.....	1,143	122	1,270
Vegetables.....	281	4,588	4,869
Miscellaneous and unclassified.....	1,461	6,936	8,397
Carbon black.....	13	25	38
Celite filtercoel.....		678	678
Cement.....	409		409
Charcoal.....	157	162	319
Chemicals.....	1,946	753	2,699
China and fire clay.....	77	194	271
Coal.....	1,433		1,433
Cocoa.....	136	18	154
Coconuts.....	60	590	650
Coffee.....	401	313	714
Coke.....	225		225
Cold storage:			
Cheese.....	12		12
Eggs.....	21	225	246
Fish.....	22		22
Lard.....	649		649
Other.....	297	309	597
Confectionery.....	783	6	789
Copra.....		32	32
Cork.....	102		102
Corn.....	18		18
Cotton.....	592	2,629	3,221
Cottonseed oilcake.....		1,200	1,200
Cottonseed meal.....		223	223
Cyanide.....	40		40
Drugs and medicines.....	1,089	104	1,193
Dyes.....	390		390
Earthenware.....	367	70	437
Eggs, dried.....		6	6
Explosives.....	219	123	342
Fertilizer.....	134	50	184
Flour.....	119	4,116	4,235
Fruit:			
Dried.....	47	9,885	9,932
Fresh.....	77	1,466	1,543
Fuller's earth.....	24	24	48
Furniture.....	1,274	15	1,289
General.....	39,094	8,519	47,613
Glass and glassware.....	3,640	120	3,760
Glue.....	66	291	357

Commodity.	Atlantie to Pacifie.	Pacifie to Atlantie.	Total.
Granite.....	35		35
Gum.....		11	11
Hair.....	37	81	118
Hardwoods.....	122	50	172
Hay.....		2,100	2,100
Hemp.....	11	90	101
Honey.....		83	83
Hops.....		183	183
Horns and hoofs.....	5		5
Infusorial earth.....		386	386
Ink.....	46		46
Jute.....	41	104	145
Kapok.....		20	20
Lard substitute.....	971		971
Leather.....	55		55
Lime.....	15		15
Linoleum.....	608		608
Liquors.....	42	200	242
Lumber.....	1,885	117,445	119,330
Malt.....	193		193
Manufactured goods:			
Iron and steel.....	54,083	455	54,538
Machinery.....	3,510	544	4,054
Railroad material.....	5,215		5,215
Tinplate.....	10,197		10,197
Textiles.....	4,508	437	4,945
Miscellaneous.....	7,555	836	8,421
Marble.....	208		208
Matchboxes.....	254	11	265
Metals:			
Copper.....	115	5,454	5,569
Iron.....	2,560		2,560
Lead.....	216	1,251	1,467
Scrap.....	692	975	1,667
Tin.....		168	168
Zinc.....	38	2,097	2,135
Other.....	35		35
Milk, powdered.....	19	959	978
Molasses.....	145		145
Musical instruments.....	13		13
Nitrates.....	1,170		1,170
Nuts.....		372	372
Oats.....	28		28
Oils:			
Cocoonut.....		954	954
Cottonseed.....	395	240	635
Gas oil, fuel oil.....	60	28,454	28,514
Gasoline, benzine, naphtha.....		155,464	155,464
Kerosene.....		5,243	5,243
Lubricating and greases.....	4,672	1,440	6,112
Vegetable.....	762	263	1,025
Other.....		21	21
Ores:			
Copper.....	877	773	1,650
Magnesite.....		136	136
Paint.....	623	103	726
Paper.....	7,467	10,335	17,802
Paper pulp.....	57	6,447	6,504
Paper roofing.....	65		65
Peanuts.....	804	951	1,755
Peas.....		130	130
Phosphates.....	399		399
Poreclain.....	313	269	582
Quicksilver.....		3	3
Rags.....		332	332
Rice.....	626	202	828
Rope.....	103	13	116
Rosin.....	197		197
Rubber:			
Manufactured.....	984	103	1,087
Raw.....	55		55
Scrap.....	30		30
Salt.....	165		165
Seeds:			
Grass.....		50	50
Hemp.....		170	170
Other.....		235	235
Shells.....	1,559	3	1,562
Silk.....		2,031	2,031
Skins and hides.....		3,082	3,082
Slate.....	291		291
Soap.....	2,098	240	2,338
Soda.....	370		370
Soda ash.....	174		174
Soda, bicarbonate.....	89		89

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Soda, caustic.....	914		914
Starch.....	61		61
Sugar.....	18	11,558	11,576
Sulphur.....	10,366		10,366
Syrup.....	101		101
Talc.....	68	140	208
Tallow.....		955	955
Tar.....	67		67
Tea.....		52	52
Tobacco.....	851	87	938
Toys.....	15		15
Turpentine.....	242		242
Vegetables.....		149	149
Waste.....	21	195	216
Wax.....	169	66	235
Wheat.....		108	108
Wine.....		615	615
Wool.....		4,075	4,075
Zinc oxide.....	106		106
Total, April, 1931.....	199,662	444,023	643,685
Total, April, 1930.....	251,812	529,345	781,157
Total, April, 1929.....	297,271	541,129	838,400

Reporting Arrivals and Departures of Commercial Aircraft.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 9, 1931.

To all concerned—In the interest of safety, the flight of all commercial aircraft in the Canal Zone shall be reported promptly to the nearest Port Captain by the owner, operator, or other representative of the owner of the aircraft. The report shall be made by telephone immediately upon arrival or prior to the departure of the aircraft. For arriving aircraft, the time of arrival, point of departure, name of aircraft commander, and number of passengers shall be given. For departing aircraft, the time of departure, destination, name of aircraft commander, and number of passengers shall be given.

H. BURGESS,
Governor.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 1, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.28
Gasoline, motor grade.....	Gal.	.15
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.07
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 9, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
West Ivis.....	McCormick S. S. Line.....		May 3.....		45
Grunewald.....	Hamburg-American Line.....		May 3.....		162½
President Jackson.....	Dollar Line.....	May 3.....	May 3.....	150	(²)
Vancouver.....	Hamburg-American Line.....	May 3.....	May 3.....	108	105
Irioma.....	United Fruit Co.....	May 3.....	May 3.....	123	220
Lochkatrine.....	Royal Mail Steam Packet Co.....	May 3.....	May 3.....	168	(²)
Esparta.....	United Fruit Co.....	May 3.....	May 4.....	616	(²)
Venezuela.....	Panama Mail S. S. Co.....	May 3.....	May 4.....	190	678
City of San Francisco.....	Panama Mail S. S. Co.....	May 3.....	May 5.....	1,011	159
Carl Legien.....	Hamburg-American Line.....	May 4.....	May 4.....	52	66
Asia.....	Danish-East Asiatic Line.....	May 4.....	May 4.....	231	(²)
Cerigo.....	Hamburg-American Line.....	May 4.....	May 9.....	737	200
Lycia.....	Canadian Transport Co.....	May 5.....	May 5.....	140	(²)
Pearl Marie.....	R. Feuillebois.....	May 5.....	May 5.....	(¹)	37
Crijnsen.....	Royal Netherlands S. S. Co.....	May 5.....	May 6.....	79	(²)
Baralt.....	Royal Netherlands S. S. Co.....	May 5.....	May 6.....	612	63
Metapan.....	United Fruit Co.....	May 5.....	May 6.....	51	625
Salvador.....	Pacific Steam Navigation Co.....	May 6.....		296	
Rugia.....	Hamburg-American Line.....	May 6.....	May 7.....	46	11
Tela.....	United Fruit Co.....	May 6.....	May 7.....	1,245	57
Nosa Chief.....	N. O. & S. A. S. S. Co.....	May 6.....	May 7.....	273	222
Cristobal.....	Panama R. R. S. S. Line.....	May 6.....		3,051	
El Salvador.....	Panama Mail S. S. Co.....	May 6.....	May 7.....	735	465
Sixaola.....	United Fruit Co.....	May 6.....	May 7.....	301	254
Caldas.....	National Navigation Co.....		May 8.....		259
Aconagua.....	Chilean S. S. Line.....	May 8.....	May 8.....	(¹)	6
Abraham Lincoln.....	Fred Olsen & Co.....	May 8.....	May 8.....	(¹)	368
Calamares.....	United Fruit Co.....	May 8.....	May 8.....	254	32
Martinique.....	Colombian S. S. Line.....	May 8.....	May 8.....	53½	442
Contessa.....	Standard Fruit & S. S. Co.....	May 8.....	May 9.....	193	348
Crijnsen.....	Royal Netherlands S. S. Co.....	May 8.....	May 9.....	14	661
Lobos.....	Pacific Steam Navigation Co.....	May 8.....	May 9.....	22½	42
Pacific Grove.....	Furness, Withy & Co.....	May 8.....	May 9.....	(¹)	145
Santa Elisa.....	Grace Line.....	May 8.....	May 9.....	149	317
Tillie Lykes.....	Lykes Brothers.....	May 9.....		993	
City of San Francisco.....	Panama Mail S. S. Co.....	May 9.....		84	
Manizales.....	Roland S. S. Line.....	May 9.....		536	

¹ No cargo discharged.

² No cargo laded.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending May 9, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Tai Yang.....	Barber Wilhelmsen Line.....	April 24.....	April 24.....	307	
Santa Rita.....	Grace Line.....	April 25.....	April 25.....	120	4
Syra.....	Hamburg-American Line.....	April 25.....	April 25.....	157	
Saramacca.....	United Fruit Co.....	April 26.....	April 27.....	307	
Taketoyo Maru.....	Nippon Yusen Kaisha.....	April 29.....	April 30.....	173	
Marit.....	Shell Oil Co.....	April 30.....	May 2.....	7,866	
Invincible.....	Tampa Inter-ocean S. S. Co.....	April 30.....	May 1.....	283	
Pennsylvania.....	Panama-Pacific Line.....	May 1.....	May 1.....		200
Santa Barbara.....	Grace Line.....	May 1.....	May 1.....	10	5
Canea.....	National Navigation Co.....	May 1.....	May 1.....		1
Cathwood.....	Union Oil Co.....	May 1.....	May 2.....	11,090	44
Santa Inez.....	Grace Line.....	May 1.....	May 2.....	24	
Laurits Swenson.....	Fred Olsen & Co.....	May 2.....	May 4.....	2,579	1
Wichita.....	Roosevelt S. S. Co.....	May 2.....	May 2.....	102	
City of San Francisco.....	Panama Mail S. S. Co.....	May 2.....	May 2.....	44	
Esparta.....	United Fruit Co.....	May 3.....	May 3.....	175	
Lycia.....	Canadian Transport Co.....	May 4.....	May 5.....	274	
Venezuela.....	Panama Mail S. S. Co.....	May 4.....	May 5.....	20	1
El Salvador.....	Panama Mail S. S. Co.....	May 5.....	May 6.....	88	
San Mateo.....	United Fruit Co.....	May 6.....	May 7.....	600	20
Abraham Lincoln.....	Fred Olsen & Co.....	May 8.....	May 8.....	1	

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., May 20, 1931.

No. 42.

Cargo Through the Canal During April, 1931.

On pages 600 and 601 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in April, 1931. This cargo, segregated according to direction as compared with April, 1930, and the differences, are shown in the following tabulation:

	April, 1930.	April, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	806,119	553,609	-252,510
Pacific to Atlantic.....	1,650,663	1,457,508	-193,155
Total.....	2,456,782	2,011,117	-445,665

It will be noted from the above that the Atlantic to Pacific tonnage decreased 252,510 tons (31.3 per cent) in comparison with April, 1930, and that from the Pacific to Atlantic decreased 193,155 tons (11.7 per cent), making a total decrease of cargo tonnage in both directions of 445,665 tons (18.1 per cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Seventy-one (71) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States, and 18.3 per cent in Europe, these two areas contributing over 89 per cent of the total cargo moving in this direction in April, 1931. In comparison with April, 1930, tonnage from the United States declined 134,247 tons (25.5 per cent), and that from Europe decreased 116,470 tons (53.5 per cent). The percentage of the total originating in the United States was considerably higher in the past month than in April, 1930, while the percentage of the total coming from Europe was lower in April, 1931.

Destination.—Forty-four and four-tenths (44.4) per cent of the Pacific-bound cargo tonnage was destined to the United States; 25.7 per cent to Asia; 11.4 per cent to South America; and 6.8 per cent to Australasia. Tonnage to all these areas decreased in comparison with April, 1930, as follows: To the United States, 76,237 tons, or 23.6 per cent; to Asia, 51,903 tons, or 26.7 per cent; to South America, 79,543 tons, or 55.7 per cent; and to Australasia, 59,003 tons, or 61.0 per cent. The proportion of the total cargo destined to the United States and Asia was higher in April, 1931, than in April, 1930, while that to South America and Australasia showed decided decreases in this feature. The heavy decrease in tonnage destined to South America was principally in cargo originating in Europe, which registered a decrease of 70 per cent under the Europe-to-South America tonnage in April, 1930. In the United States-to-South America trade a decrease of 43.2 per cent occurred. The heavy loss in cargo tonnage

to Australasia was evenly distributed, there occurring a 57.4 per cent decrease in tonnage originating in Europe in comparison with April, 1930, and a 56 per cent decrease in that coming from the United States.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.1 per cent came from the United States; 21.5 per cent from South America; 12.9 per cent from Canada; 9.6 per cent from Asia; and 6.7 per cent from Australasia. Cargo from Asia (including the Philippine Islands) showed a proportionate as well as actual increase in tonnage in comparison with April, 1930, the actual increase amounting to 64,050 tons, or 84.6 per cent. This was due principally to exceptionally heavy sugar shipments from the Philippine Islands last month, consigned mostly to the United States. Cargo tonnage from the other before-mentioned areas decreased in actual tonnage as follows: From the United States, 131,898 tons, or 16.4 per cent; from South America, 66,052 tons, or 17.4 per cent; from Canada, 25,558 tons, or 12.0 per cent; and from Australasia, 55,147 tons, or 36.0 per cent. In relation to the total cargo tonnage, the amounts coming from the United States, South America, and Australasia, showed small decreases, while that from Canada was approximately the same as in April, 1930.

Destination.—Segregated according to destination, 55.4 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States, and 36.9 per cent to Europe. Tonnage to the United States decreased 142,184 tons, or 15.0 per cent, in comparison with April, 1930, and that to Europe declined 28,178 tons, or 5.0 per cent. In their proportions to the total cargo, the tonnage to the United States was slightly lower and to Europe higher in April, 1931, than in April, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 87 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of April, 1931. The remaining 13 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for April, 1930, or April, 1931, are listed in the following tabulation, showing differences:

Commodity.	April, 1930.	April, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Ammonia.....	16,996	8,278	-8,718
Automobiles.....	15,374	7,769	-7,605
Cement.....	35,539	12,131	-23,408
Coal and coke.....	22,929	7,476	-15,453
Cotton.....	19,590	32,976	+13,386
Manufactured goods:			
Iron and steel.....	170,008	100,760	-69,248
Machinery.....	17,797	9,298	-8,499
Railroad material.....	19,055	9,230	-9,825
Textiles.....	11,078	6,638	-4,440
Tinplate.....	28,362	21,783	-6,579
Miscellaneous.....	12,782	10,929	-1,853
Metal, scrap.....	15,021	692	-14,329
Oils, mineral.....	48,290	41,204	-7,086
Paper.....	22,891	16,987	-5,904
Phosphates.....	40,557	41,291	+734
Silversand.....	12,517	.....	-12,517
Slag.....	11,735	3,845	-7,890
Sugar.....	17,969	13,045	-4,924
Sulphur.....	30,982	10,381	-20,601

The above 19 commodity groups for April, 1931, comprise 64.1 per cent of the total cargo moving from the Atlantic to the Pacific. Except for a substantial increase in the movement of cotton, and a slight increase in the shipments of phosphates, the above listed commodities all showed decreases in comparison with April, 1930.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 98 per cent of the cargo moving from the Pacific to the Atlantic during April, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	April, 1930.	April, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	13,035	19,430	+6,395
Beans.....	7,691	14,473	+6,782
Canned goods (fish, fruit, vegetables, etc.).....	45,737	47,755	+2,018
Coffee.....	19,581	14,603	-4,978
Cold storage (food products).....	36,608	42,372	+5,764
Copra.....	14,414	15,013	+599
Flour.....	10,007	12,384	+2,377
Fruit, dried.....	8,805	18,534	+9,729
Fruit, fresh.....	8,294	21,323	+13,029
Lumber.....	305,523	194,422	-111,101
Metals, various.....	54,068	51,904	-2,164
Molasses.....	2,335	14,291	+11,956
Nitrates.....	71,063	80,729	+9,666
Oils, mineral.....	420,252	367,931	-52,321
Oil, whale.....	47,330	19,000	-28,330
Ores, principally iron.....	210,475	96,857	-113,618
Paper.....	8,762	12,078	+3,316
Sugar.....	72,325	144,589	+72,264
Wheat.....	166,242	123,126	-43,116
Wool.....	17,062	17,408	+346

* Does not include fresh fruit.

The above 20 commodity groups for April, 1931, comprise 91.1 per cent of the cargo moving from the Pacific to the Atlantic. Thirteen of the items show increases and 7 decreases. Heavy decreases occurred particularly in the shipments of lumber, ores, and mineral oils, more than offsetting the small increases made in the shipments of other commodities. The most important increase was made in the shipments of sugar, the majority of which went to the United States from the Philippine Islands.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 16, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Democracy.....	Nelson Line.....	May 7.....	May 9.....	938	102
Santa Elisa.....	Grace Line.....	May 9.....	May 9.....	243	66
Sutherland.....	Nelson Line.....	May 10.....	May 11.....	196	.....
Nitro.....	U. S. Government.....	May 10.....	May 12.....	1	23
St. Mihil.....	U. S. Government.....	May 11.....	May 12.....	203	26
City of San Francisco.	Panama Mail S. S. Co.....	May 11.....	May 11.....	.....	1
Santa Maria.....	Grace Line.....	May 11.....	May 11.....	27	1
Kenowis.....	U. S. Government.....	May 12.....	May 13.....	238	8
Suriname.....	United Fruit Co.....	May 13.....	May 14.....	164	133
Nora.....	Union Oil Co.....	May 13.....	May 14.....	13,558	.....
Bennekom.....	Royal Netherlands S. S. Co.....	May 13.....	May 13.....	85	.....
Santa Clara.....	Grace Line.....	May 14.....	May 14.....	77	.....
Nore.....	Anglo-Saxon Petroleum Co.....	May 15.....	May 16.....	1,331	.....
California.....	Panama-Pacific Line.....	May 15.....	May 15.....	.....	189
President Van Buren.....	Dollar Line.....	May 15.....	May 15.....	2	1
Santa Teresa.....	Grace Line.....	May 15.....	May 16.....	2	.....

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, April, 1931.—Continued from page 599.
(Figures represent tons of 2,240 pounds.)

FROM—	NORTH AMERICA.						SOUTH AMERICA.						AUSTRALASIA.				ASIA.					Grand total.	Per cent of total cargo.
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.	Japan.	Far East. ¹	Total, Asia.			
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports.....	156,251	729	950	432 16,365	174,727	13,357	761		425 3,339	687 18,569	7,117 1,649			8,766 11,439	16,143	28,425 5,578			61,585 263,647	47 6			
South Atlantic ports.....	4,897	31		600		5,528								420 746	2,215 10	3,391			8,919 1 6				
Gulf ports.....	38,514	360		212	65	39,151	2,503 230	65 714		3,512 2,513				2,513 49	3,126 72,290			75,465 120,641	21 8				
Total, United States.....	199,662	1,120	950	1,244 16,430	219,406	15,860	991		490 4,053	687 22,081	9,630 1,649			11,279 11,908	20,015	102,930 5,588	140,441 393,207	71 0					
East coast of Canada.....	2,201					2,201								3,028					5,229 1 0				
East coast of Central America.....	500					2,674 6,100				6,100									8,864 1 6				
Cristobal, C. Z. ²	3,400					6,812 1,536	1,173 842	298 500		3,349									11,161 2 0				
West Indies.....	5,307	6,054	60	9,183		20,604 3,868				3,868									24,472 4 4				
Total, North America.....	208,929	9,375	6,536	10,427 16,430	251,697	27,454 2,164	1,332 4,351	1,187 36,488	12,658 1,649	14,307 11,908	20,015 102,930	5,588 140,441	442,933 80 0										
EUROPE:																							
British Isles.....	3,594	6,332				9,926 3,273	44 1,205	1,657 1,271	7,450 532	17,719 2,726	20,977 38,353	6 9							22,447 4 1				
Belgium.....	13,047	1,903	2,016	41	1,237	18,304 2,268	42 787	596 3,693		450 450													
Denmark.....	7	80				1,005 656		16 58	730 2,985	1,250 1,250													
France.....	918	2				9,407 2,928	188 336	1,438 18	4,908 14,315														
Germany.....	3,421	427	102			1,678 1,293	143 58	761 2,256											3,934 0 7				
Holland.....	1,509	100		69		637 1,022		353 1,375											2,012 0 4				
Italy.....	593	44				4,311 156		13 567	21 588										4,899 0 9				
Norway and Sweden.....	2,305									169									109 0 0				
Spain and Portugal.....		36	1,397			5,975 2,004	548 626	354 2,557	6,089 12,064														
Europe.....	4,542					51,245 13,600	965 3,029	5,250 3,846	26,670 1,099	17,740 4,426	23,265 101,180	18 3											
Total, Europe.....	29,929	8,911	3,606	3,105	6,694	124,310 43,164	3,129 4,361	9,581 5,033	63,158 757	19,389 4,426	37,572 11,908	20,015 104,937	5,588 142,448	553,009 100 0									
East coast of South America.....	7,327	162				7,489								2,007					9,496 1 7				
Grand total.....	246,185	18,448	10,142	532 23,124	310,431 64,431	654 3,129	4,361 9,581	5,033 63,158	757 19,389	4,426 37,572	11,908 20,015	104,937 5,588	142,448 553,009	100 0									
Per cent of total cargo:																							
April, 1931.....	44.4	3.3	2.0	2.2	4.2	56.1	7.4	0.6	0.8	1.7	0.9	11.4	2.5	3.5	0.8	6.8	2.1	3.6	18.9	1.1	25.7	100 0
April, 1930.....	40.0	2.6	1.6	0.2	1.8	46.2	10.2	0.2	0.3	2.3	4.7	17.7	2.3	8.2	1.5	12.0	2.1	5.9	13.2	2.9	24.1	100 0
April, 1929.....	42.6	1.7	3.0	0.0	1.9	49.2	4.9	2.2	0.4	2.4	6.9	16.8	3.9	10.0	0.4	14.3	2.9	4.6	10.4	1.8	19.7	100 0

¹ General cargo not routed so as to allow segregation between definite ports.

² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, April, 1931.

(Figures represent tons of 2,240 pounds.)

From—	North America.										Europe.												Grand total.	Per cent of total cargo.	
	United States.					Other North America.																			
	North Atlantic ports.	South Atlantic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Central America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. ¹	Total, Europe.	East coast of South America.	India.			Africa.
NORTH AMERICA:																									
West coast U. S.	398,833	3,668	41,472	444,023	372	11,560	14,291	470,276	106,384	583	4,304	15,515	13,875	8,240	1,287	12,871	240	31,511	104,810	942	2,144	22	671,194	46.1	
West coast Canada	13,043	487	13,530	12,196	5,906	6,210	12,241	28,156	64,967	1,154	1,862	18,224	8,363	9,823	344	959	7,470	47,034	159,241	640	188,037	12.9	188,037	12.9	
W. coast Cen. America	304	304	304	304	403	403	24,227	12,600	24,227	12,600	1,737	6,166	34,964	23,307	18,108	1,631	13,830	7,710	78,545	369,949	4,582	2,144	22	905,069	62.2
Bahio, C. Z.	15,745	8,482	24,227	24,227	171	171	4,955	958	225,306	16,164	5,260	2,538	13,233	13,681	2,397	2,141	8,393	1,650	22,267	87,724	570	313,000	21.5	313,000	21.5
Hawaiian Islands	114	114	114	114	114	114	4,955	958	225,306	16,164	5,260	2,538	13,233	13,681	2,397	2,141	8,393	1,650	22,267	87,724	570	313,000	21.5	313,000	21.5
Total, N. America:	427,975	3,668	50,844	482,487	12,196	372	11,560	16,709	529,272	183,951	1,737	6,166	34,964	23,307	18,108	1,631	13,830	7,710	78,545	369,949	4,582	2,144	22	905,069	62.2
SOUTH AMERICA:																									
Chile	114	278	24,278	15,368	153,924	332	958	155,194	6,576	4,877	221	4,850	3,552	1,721	1,780	1,620	1,600	20,707	47,504	202,698	13.9	202,698	13.9		
Colombia	4,069	140	4,209	2,176	2,176	2,176	9	6,394	100	105	69	682	377	440	327	25	50	473	7,658	60	643	0.4	643	0.4	
Ecuador	8,620	8,620	8,620	2,216	2,216	2,216	60	10,836	100	105	69	682	377	440	327	25	50	473	7,658	60	643	0.4	643	0.4	
Peru	2,906	2,906	2,906	2,906	2,906	2,906	60	11,524	9,481	278	2,248	7,091	9,692	236	34	6,748	133	36,844	570	89,708	6.2	89,708	6.2		
W. coast South Amer.	114	114	114	114	114	114	171	288	4	4	4	4	4	4	4	4	4	4	958	958	1,240	1,240	1,240	1,240	
Total, S. America:	129,987	24,278	15,511	169,776	49,617	4,955	958	225,306	16,164	5,260	2,538	13,233	13,681	2,397	2,141	8,393	1,650	22,267	87,724	570	313,000	21.5	313,000	21.5	
AUSTRALASIA:																									
Australia	9,018	9,018	9,018	9,018	934	562	10,514	3,781	10,514	3,781	42	1,310	42	1,310	42	1,310	1,243	62,419	3,781	14,285	1.0	14,285	1.0		
New Zealand	1,178	1,178	1,178	1,178	182	1,065	2,425	59,824	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	
Australasia	19,000	19,000	19,000	19,000	19,000	1,065	2,425	59,824	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	19,000	
Total, Australasia	29,196	29,196	29,196	29,196	1,116	1,627	31,939	63,605	31,939	63,605	42	1,310	42	1,310	42	1,310	1,243	66,200	3,781	98,139	6.7	98,139	6.7		
ASIA:																									
Philippine Islands	100,211	8,971	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	109,182	
China	8,273	8,273	8,273	8,273	8,273	8,273	63	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	7,404	
Japan	7,478	7,478	7,478	7,478	7,478	7,478	16	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	7,494	
Far East	1,610	405	1,610	1,610	1,610	1,610	15	1,430	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	
Total, Asia	116,972	9,376	126,348	126,348	126,348	126,348	91	126,442	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	5,450	
Grand total	704,130	27,946	731,807	807,629	372,24	184	17,667	912,959	209,170	6,997	8,704	48,197	44,938	21,815	3,772	22,222	9,360	102,055	537,231	5,152	2,144	22	1,457,508	100.0	
Per cent of total cargo:																									
April, 1931	48.3	1.9	5.2	55.4	4.3	0.2	1.7	1.2	62.6	18.5	0.5	0.6	3.3	3.1	1.5	0.3	1.5	0.6	7.0	36.9	0.4	0.1	0.1	100.0	100.0
April, 1930	50.4	2.7	4.5	57.6	4.3	0.2	1.1	1.2	64.4	16.5	1.0	0.1	1.3	1.7	0.7	0.2	1.9	1.1	9.8	34.3	0.7	0.5	0.1	100.0	100.0
April, 1929	49.7	2.4	3.8	55.9	3.9	0.2	1.1	1.0	62.1	15.4	2.2	1.1	2.6	2.6	2.7	0.4	0.8	0.7	9.3	37.8	0.1	0.1	0.1	100.0	100.0

¹ General cargo not routed so as to allow segregation between definite ports. * Includes both local and transit cargo.

* General cargo not routed so as to allow segregation between definite ports.

* Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS. *Week ending at midnight, May 16, 1931.*

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Nationality.	Line (Charterer or operator.)		Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.									Nature.	Tons.	Gross.	Net.
El Cervo ¹	9	23 45	10	6 15	British	Anglo-Panama Oil Co.	407 11	52 2	20 0		Philadelphia, Pa.	La Libertad, Ecua.	Ballast.		6 046	4 326
Kentuckian	10	1 10	10	13 56	American	Amer-Hawian Line.	414 5	53 4	19 9		Boston, Mass.	Portland, Oreg.	General.	3 432	7 049	4 941
Calgarholte ²	10	1 30	10	14 24	British	Imperial Oil Co.	321 5	70 5	25 9		Montreal, Canada	Talara, Peru	Ballast.		12 339	7 717
Tongking	10	6 55	10	7 15	Danish	East Asiatic Co.	410 0	58 2	13 0		Naksood, Denmark	Los Angeles, Calif.	Ballast.		7 033	5 317
Ionic	9	22 15	10	14 15	British	Shaw, Sewell & Albion.	500 3	63 3	29 6		London, England.	Auckland, N. Z.	General.	4 612	12 872	9 577
Omah ³	10	16 45	10	16 29	American	J. R. Powell.	425 0	54 0	22 0		Cristobal, C. Z.	Gatun, C. Z.	General.	8 002	6 798	5 174
Yaye Maru.	10	18 35	10	17 35	Japanese	Kokusai Kisen Kaisha.	419 5	56 5	28 0		Boston, Mass.	Nagoya, Japan	General.	1 600	7 080	5 025
Solana ²	10	16 45	10	17 35	American	Tidewater Oil Co.	425 0	56 5	22 0		New York, N. Y.	San Francisco, Cal.	Lubricating oil.			
City of San Francisco ²	9	17 00	11	6 20	American	Panama Mail S. S. Co.	296 0	45 0	16 0		Pto. Colombia, Col.	San Francisco, Cal.	General, coffee.	240	3 848	2 606
Brandanger ²	10	23 10	11	6 20	Norwegian.	Interocean S. S. Corp.	381 6	53 6	12 5		Swansea, England.	Vancouver, B. C.	Ballast.		6 280	4 792
Blythmoor ²	11	6 05	11	7 25	British	De Bussion	420 0	54 0	22 10		St. Kitts, B. W. I.	Vancouver, B. C.	Sugar.	6 003	6 863	5 008
Mitelmeyer ²	10	18 45	11	8 35	German	Anglo-Saxon Pet. Co.	412 0	55 0	19 11		Seawen, N. Y.	Los Angeles, Calif.	Ballast.		6 065	4 340
Delight	11	9 20	11	9 30	American	Gulf Pac. Redwood Line	379 9	53 1	21 0		Houston, Tex.	Bellingham, Wash.	Steel, etc.	3 555	3 667	4 163
Gracia	11	9 30	11	9 45	British	Donaldson Brothers.	415 6	54 0	17 0		Glasgow, Scotland	Vancouver, B. C.	General.	1 268	6 809	5 842
San Pedro	11	10 50	11	11 00	American	Dimon S. S. Corp.	395 0	55 0	17 0		Philadelphia, Pa.	Seattle, Wash.	General.	3 348	7 330	5 233
Odenwald ²	10	17 10	11	12 05	German	Hamburg-American Line	399 0	54 0	18 9		Hamburg, Germany	Valparaiso, Chile	Cement, iron, gen.	1 870 ¹	6 302	4 979
Heffron	11	14 25	11	14 30	American	Argonaut S. S. Co.	440 0	56 0	23 0		Baltimore, Md.	Seattle, Wash.	Steel, general.	6 023	8 312	6 097
Bradall ²	11	15 45	11	17 23	American	Shell Steamship S. S. Co.	416 9	56 4	16 0		New York, N. Y.	Los Angeles, Calif.	Ballast.	377		4 680
Grant ²	10	21 30	12	6 00	American	U. S. Army	400 0	55 4	26 10		Brooklyn, N. Y.	San Francisco, Cal.	General.	3 896	12 945	9 378
Huntingdon.	11	23 25	12	6 05	British	Federal Steam Nav. Co.	520 4	64 2	22 6		Liverpool, England	Pt. Chalmers, N. Z.	General.	2 331	7 601	5 346
Tsunaren ²	12	7 05	12	7 25	Swedish	Transatlantic S. S. Co.	436 0	56 2	19 0		Gefle, Sweden.	Pt. Ade, Aust'lia	General.	3 655	5 699	4 167
American Star.	12	10 45	12	10 50	American	Nelson Line.	386 0	52 2	18 3		New York, N. Y.	Seattle, Wash.	General.	1 364		
Kenowis ⁴	9	21 55	12	11 28	American	U. S. Army	390 0	54 2	18 4		Brooklyn, N. Y.	San Francisco, Cal.	Army supplies.			
Tamaba ²	12	11 10	12	12 15	British	Standard Oil Co.	430 0	54 4	17 0		Providence, R. I.	Los Angeles, Calif.	Ballast.	3 030	6 671	4 633
Californian ²	12	11 35	12	13 25	American	Amer-Hawian Line.	445 0	59 8	20 0		Boston, Mass.	Seattle, Wash.	General.		8 567	6 020
J. L. Luckenbach	12	14 40	12	15 15	American	Luckenbach Line.	448 9	60 2	21 6		Boston, Mass.	Tacoma, Wash.	General.	3 230	9 294	6 861
Fernbank ²	12	22 40	13	6 20	Norwegian.	Pern Line.	382 7	53 4	25 6		Tampa, Fla.	Shanghai, China.	Phosphate, cotton.	7 048	6 112	4 265
Benekom	12	6 15	13	7 25	Dutch.	Royal Nedh. S. S. Co.	419 7	58 0	16 0		Hamburg, Germany	Corral, Chile	General.	1 510	7 849	5 806
Paris City	13	6 05	13	8 30	British	Mitchell Grain Co.	412 0	55 0	16 0		St. Shields, Eng.	Vancouver, B. C.	Ballast.		6 673	4 764
Salvador	6	17 20	13	8 45	British	Pacific Steam Nav. Co.	215 0	33 5	15 6		Cristobal, C. Z.	Champerico, Guat.	General.	555	1 270	735
Sjornborg ²	13	16 10	13	16 15	Danish	Hanbury Timber Prod'ts	389 0	54 0	13 0		New York, N. Y.	Puget Sound, Wash.	Ballast.		6 219	4 691
Portman	13	18 20	13	18 45	American	Calmar Line.	409 8	54 2	21 0		Baltimore, Md.	Seattle, Wash.	General.	4 507	6 581	4 795
Vindal ²	14	7 10	14	9 45	Norwegian.	Scand. Soc. Pacific Line.	438 0	54 0	19 0		Oslo, Norway	Corral, Chile	General.	4 115	5 413	3 965
Ethan Allen.	14	10 45	14	11 00	American	Amer. Gulf Orient Line.	369 0	60 2	25 10		New Orleans, La.	Davao, P. I.	Case oil, general.	8 431	8 978	6 525
Santa Clara.	14	4 30	14	12 15	American	Grace Line.	433 3	63 9	23 10		New York, N. Y.	Talcahuano, Chile	General.	1 446	11 680	7 442
Masoch ²	14	17 30	14	18 50	American	Nelson Line.	324 0	46 2	22 0		Baltimore, Md.	Seattle, Wash.	General, pipe.	2 372	3 984	2 628

¹ Tanker. ² Motor ship. ³ Launch. ⁴ Transport.

Mathew	14	23	40	15	6	15	15	13	45	15	14	55	American	Luckenbach Line	434.3	58.0	23.0	New Orleans, La.	Seattle, Wash	5,900	7,977	5,764
York City	15	1	05	15	6	20	15	14	03	15	14	55	British	Reardon Smith Line	411.0	55.0	13.0	Boston, Mass.	Vancouver, B. C.	5,900	7,038	5,166
President Van	15	3	00	15	7	10	15	14	29	15	21	45	American	Dollar Line	502.0	62.2	27.0	New York, N. Y.	San Francisco, Cal.	3,771	12,023	8,495
Buenos Aires	15	5	55	15	7	20	15	14	59	16	00	10	American	Panama-Pacific Line	574.4	80.3	26.8	New York, N. Y.	San Francisco, Cal.	2,559	24,506	17,565
California	15	1	10	15	8	05	15	15	18	15	16	01	Norwegian	Farquhar & Eger	382.7	52.0	15.0	Baltimore, Md.	Vancouver, B. C.	6,112	4,284	
Fernell	14	21	35	10	05	15	17	08	15	18	01	40	American	McCormick & S. Co.	410.5	61.0	17.6	Buenos Aires, Arg.	Los Angeles, Calif.	2,185	6,624	5,040
West Camargo	15	10	05	15	10	15	17	28	15	23	48	British	Con'th & Dom. Line	477.0	63.0	27.8	Hull, England	Dunedin, N. Z.	8,240	10,720	7,692	
Port Huon	14	10	05	15	11	10	15	18	35	15	22	40	German	Hamburg-American Line	461.5	61.0	19.2	Hamburg, Germany	Vancouver, B. C.	2,564	9,267	6,834
Seattle	14	14	10	15	11	10	15	18	35	15	22	40	German	Hamburg-American Line	461.5	61.0	19.2	Hamburg, Germany	Vancouver, B. C.	2,564	9,267	6,834
Lebore	14	6	15	15	12	35	15	20	45	15	20	55	American	Ore S. S. Corp.	509.0	72.0	23.0	Cruz Grande, Chile	Antofagasta, Chile	14,325	4,485	
San Antonio	14	4	55	15	13	32	15	20	35	15	21	45	American	Quaker S. S. Line	449.8	54.0	19.0	Philadelphia, Pa.	Portland, Ore.	2,980	7,755	4,837
San Diego	14	15	10	15	14	35	15	20	35	15	22	57	Norwegian	United Fruit Co.	337.0	41.0	17.9	San Francisco, Cal.	San Francisco, Cal.	3,697	7,329	
Suriname	16	5	05	16	6	20	16	13	46	16	17	15	Norwegian	Anglo-Saxon P&T Co.	337.0	41.0	17.9	San Francisco, Cal.	San Francisco, Cal.	3,697	7,329	
Florence	16	12	05	16	13	00	16	19	35	16	20	30	American	Anglo-Saxon P&T Co.	407.7	53.0	17.0	Boston, Mass.	Portland, Ore.	2,200	2,492	1,676
Iowa	16	12	05	16	13	00	16	19	35	16	20	30	American	Anglo-Saxon P&T Co.	407.7	53.0	17.0	Boston, Mass.	Portland, Ore.	2,200	2,492	1,676
Kurama Maru	16	16	15	16	14	25	16	21	07	16	23	33	Japanese	Kokusei Kisen Kaisha	438.0	58.0	25.0	New York, N. Y.	Yokohama, Japan	8,213	8,230	3,028
Willmote	16	16	40	16	16	55	17	9	04	17	10	15	American	Williams S. S. Line	390.0	54.2	21.6	Baltimore, Md.	Seattle, Wash.	3,895	6,162	4,433

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Victoria City...	10	00	05	10	6	19	10	13	30	10	15	35	British	Reardon Smith Line	400.0	54.2	26.0	Honolulu, T. H.	Manchester, Eng.	7,800	6,904	5,389
Samuel Bakke	10	00	30	10	6	53	10	14	15	10	16	00	Norwegian	Scand. South Pac. Line	390.8	54.7	26.0	Corral, Chile	Stockholm, Sweden	6,924	6,822	5,001
Clifton	10	00	30	10	6	53	10	14	15	10	16	00	American	Capt. Joseph Martin	34.6	8.3		Balboa, C. Z.	Gatun Lake, C. Z.			4
Jacob Luckenbach	10	3	00	10	7	15	10	14	50	10	14	50	American	Luckenbach Line	434.3	57.7	23.0	Los Angeles, Calif	Mobile, Ala.	4,217	7,982	5,922
Pont Montana	10	6	40	10	8	12	10	15	35	10	15	35	American	Swayne & Hoyt	324.0	46.2	20.0	Portland, Ore	New Orleans, La.	2,615	3,984	2,612
Toronto	10	5	30	10	8	44	10	17	35	10	17	35	Norwegian	Canadian Transport Co.	381.8	52.2	25.0	Olympia, Wash.	Belfast, Ireland	5,576	5,673	3,592
Corinto	10	8	25	10	9	25	10	16	35	10	16	35	American	Panama Mail S. S. Co.	261.1	40.0	15.0	Acapulco, Salvador	Cristobal, C. Z.	881	2,352	1,519
Brilliant	11	2	30	11	6	27	11	14	05	11	14	05	American	Standard Transp. Co.	480.5	66.0	29.0	Los Angeles, Calif	New York, N. Y.	13,089	9,779	6,712
Hegira	11	1	30	11	6	51	11	15	10	11	15	10	American	Leguia S. S. Co.	440.0	56.0	27.0	Everett, Wash.	Newark, N. J.	10,000	8,353	6,113
Santa Cecilia	11	3	00	11	7	23	11	15	50	11	15	50	American	Argonaut S. S. Co.	404.6	53.9	28.0	Port Allen, T. H.	New York, N. Y.	7,834	6,745	4,567
Storage	11	4	40	11	8	27	11	16	25	11	16	25	Norwegian	Anglo-Saxon P. & T. Co.	473.6	64.5	29.0	San Francisco, Cal.	Curacao, D. W. I.	13,089	9,592	6,775
Sutherland	10	14	55	11	11	36	11	18	45	11	18	45	American	Nelson S. S. Co.	380.0	53.2	25.0	San Francisco, Cal.	Baltimore, Md	4,469	5,654	4,123
Santa Maria	11	8	10	11	12	10	11	19	25	12	00	45	American	Grace Line	466.0	64.0	23.0	Talcahuano, Chile	New York, N. Y.	4,251	10,626	6,680
Canadian	11	14	45	11	18	42	12	11	20	12	11	20	British	Can. Nat. Steamships	430.0	56.2	19.3	Sydney, N. S. W.	Montreal, Canada	1,800	7,680	5,494
Construct.	11	11	45	12	6	30	12	14	15	12	15	05	American	Panama-Pacific Line	586.4	80.3	27.0	San Francisco, Cal.	New York, N. Y.	3,556	25,254	18,170
Timonahua	11	20	00	12	6	40	12	15	30	12	15	30	American	Standard Oil Co.	416.9	56.2	24.0	San Francisco, Cal.	Las Viedras, Venez.	6,738	4,775	
Dramatis	11	22	05	12	7	17	12	17	10	12	21	15	British	T. & J. Harrison	410.0	52.3	29.0	San Francisco, B. C.	Liverpool, England	6,999	6,202	4,154
Donau	11	22	20	12	8	11	12	17	50	12	22	05	German	North German Lloyd	520.8	63.6	26.0	Vancouver, B. C.	Antwerp, Belgium	10,900	11,607	7,098
K. I. Luckenbach	11	22	20	12	8	11	12	17	50	12	22	05	German	North German Lloyd	520.8	63.6	26.0	Vancouver, B. C.	Antwerp, Belgium	10,900	11,607	7,098
Neser Prince	12	2	40	12	9	14	12	19	15	12	21	25	American	Luckenbach Line	446.0	56.1	28.0	Portland, Ore	Boston, Mass	6,735	8,552	6,236
Alaskan	12	3	45	12	9	45	12	19	40	12	19	40	American	N. O. & S. A. S. Co.	324.0	46.2	23.0	San Antonio, Chile	New Orleans, La.	4,407	2,983	2,570
Canadian	12	3	45	12	9	45	12	19	40	12	19	40	American	Amer-Hawalian Line	415.0	53.7	25.0	Portland, Ore	Boston, Mass	5,667	7,380	5,359
Importer	12	4	30	12	10	39	12	20	45	12	23	45	British	Can. Nat. Steamships	400.5	52.4	23.0	Vancouver, B. C.	Montreal, Canada	6,034	5,891	4,186
Nitro	10	19	30	11	11	19	12	21	10	11	13	11	American	U. S. Navy	483.1	60.1	22.3	San Diego, Calif	Hampton Rds., Va.	6,099		
Leonor	12	11	10	12	12	12	12	21	35	12	35	American	Calmar Line	409.8	54.7	25.0	Seattle, Wash	Baltimore, Md	7,430	6,581	4,795	
Willmote	12	11	55	12	13	02	12	22	00	12	22	00	American	Williams S. S. Corp.	386.8	52.2	25.0	Seattle, Wash	Baltimore, Md	7,110	5,680	4,080
St. Mibel	11	15	10	12	14	47	12	23	15	13	13	05	American	U. S. Army	448.0	58.0	22.0	San Francisco, Cal.	Brooklyn, N. Y.	185		

^s Motor ship.

⁶ Launch.

⁷ Nittes, beans, and coffee.

⁸ Tanker.

* Launch.

* Motor ship.

* Nitrates, beans, and coffee.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.	Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Gross.	Net.
West Notes.	12	14 00	12	15 07	12	23 05	13	6 10	American.	McCormick S. S. Co.	410 5	54 3	22 5	Powell River, B. C.	Buenos Aires, Arg.	Lumber, general.	4,096	6,583	5,014
Teno.	12	20 30	13	6 22	13	13 40	13	15 50	Chilean.	South Amer. S. S. Co.	421 8	56 0	24 0	Talcahuano, Chile.	New York, N. Y.	General.	2,901	7,764	4,672
Lochgal.	12	21 37	13	6 41	13	14 25	13	23 20	British.	Royal Mail S. P. Co.	485 6	62 3	30 0	Vancouver, B. C.	Rotterdam, Holland.	General.	9,760	10,803	7,006
Rhein.	13	2 00	13	7 16	13	15 10	13	20 20	German.	Hamburg-American Line	433 6	58 1	24 0	Valparaiso, Chile.	Hamburg, Germany.	General.	8,603	8,073	5,952
Erlangen.	13	6 10	13	7 33	13	15 15	14	2 00	German.	Rehland Line.	470 1	57 1	26 0	Valparaiso, Chile.	Hamburg, Germany.	General.	7,469	7,750	5,282
Kyrenai Maru.	13	12 50	13	14 07	13	23 45	14	00 50	Japanese.	Ozaka Shosen Kaisha.	461 0	61 5	25 0	Hongkong, China.	New York, N. Y.	General.	4,450	9,414	6,790
Shiverack.	13	13 37	13	15 39	13	23 24	13	23 20	American.	Kerr S. S. Co.	333 8	48 0	23 0	Olympia, Wash.	New York, N. Y.	Lumber.	5,000	4,128	2,741
Rangtane.	13	11 15	14	6 11	14	13 55	14	13 52	British.	N. Z. Shipping Co.	531 0	70 2	27 0	Auckland, N. Z.	London, England.	Frozen, general.	5,332	13,205	13,494
Srinanone.	13	13 36	14	6 45	14	15 10	15	14 35	American.	United Fruit Co.	336 7	41 9	20 0	San Francisco, Cal.	Cristobal, C. Z.	General.	1,116	3,667	2,329
Longston.	14	00 20	14	7 07	14	15 40	14	15 40	American.	Ritchfield Oil Co.	482 5	60 2	27 0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,500	8,491	6,065
Rea.	14	1 05	14	8 06	14	16 15	14	16 15	Danish.	Strang & Co.	385 6	54 2	26 0	N. West ster, B. C.	Baltimore, Md.	Lumber.	7,190	6,736	5,064
Gaidborg.	14	7 40	14	8 31	14	17 30	15	1 05	Italian.	Nav. Libera Tristina.	523 1	64 0	25 0	Vancouver, B. C.	Genoa, Italy.	General.	9,523	13,787	9,856
Pacific Hen-	14	00 30	14	9 10	14	17 30	14	17 30	American.	Dimon S. S. Corp.	409 7	54 2	25 0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,894	6,630	4,916
lock.	14	1 30	14	9 55	14	18 20	15	22 20	French.	French Line.	417 8	55 9	27 0	Talcahuano, Chile.	Haar, France.	General.	8,440	7,157	4,936
Indiana.	14	3 00	14	10 07	14	18 30	14	18 30	British.	Pacific Wheat Corp.	411 7	54 6	23 0	Pr. Rupert, B. C.	Dunkirk, France.	Wheat.	8,959	9,957	5,133
Welsh City.	14	4 00	14	10 32	14	19 25	15	14 05	British.	Cathian Steam Nav. Co.	420 5	54 2	27 0	Corral, Chile.	Liverpool, England.	General.	8,013	7,139	4,640
Laguna.	14	10 45	14	11 16	14	20 00	15	5 35	Japanese.	Ozaka Shosen Kaisha.	407 2	50 8	21 0	Taku Bar.	New York, N. Y.	General.	2,285	6,533	4,772
Hague Maru.	14	11 45	14	12 43	14	20 20	14	20 20	American.	McCormick S. S. Co.	409 5	54 2	25 0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	7,380	6,506	4,960
Narore.	14	2 30	14	16 04	15	05 15	15	05 00	American.	Bethlehem Steel Corp.	530 3	72 2	35 0	Cruz Grande, Chile.	Baltimore, Md.	Iron ore.	21,652	15,351	9,297
Georgian.	14	23 00	15	6 25	15	15 05	15	15 00	American.	Amer-Hawaiian Line.	434 3	57 7	27 0	Seattle, Wash.	Boston, Mass.	Lumber, general.	7,729	7,983	5,912
Hugenot.	15	6 20	15	7 16	15	17 15	17 10	17 10	American.	Ritchfield Oil Co.	434 8	56 2	27 0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	9,585	7,394	5,099
Taranger.	15	14 40	15	15 31	16	9 00	16	9 00	Norwegian.	Interocean S. S. Corp.	398 1	54 7	28 0	Vancouver, B. C.	Rotterdam, Holland.	Wheat, general.	7,558	6,858	5,308
Afton.	15	18 00	15	19 14	16	11 25	16	11 25	American.	Capt. Joseph Martin.	34 6	8 3		Balboa, C. Z.	Gatun Lake, C. Z.	Ballast.	8		3
San Lucas.	15	18 00	15	19 14	16	11 25	16	11 25	American.	Pacific Atlantic S. S. Co.	415 1	55 7	28 0	Seattle, Wash.	Philadelphia, Pa.	Lumber, general.	8,136	7,643	5,720
Santa Teresa.	15	15 10	16	6 18	16	13 00	16	20 35	American.	Groce Line.	399 2	51 9	24 0	Valparaiso, Chile.	New York, N. Y.	General.	3,682	5,726	4,056
Nore.	15	6 15	16	6 32	16	13 55	16	13 55	Norwegian.	Anglo-Saxon Pet. Co.	400 5	51 9	25 1	Los Angeles, Calif.	United Kingdom.	Gasoline.	8,823	8,297	5,572
Bodega.	16	00 05	16	7 10	16	15 20	17	2 40	Dutch.	Royal Neth. S. S. Co.	400 9	53 2	25 5	Corral, Chile.	Amsterdam, Holland.	General.	7,705	7,834	6,018
Lapona.	16	00 50	16	7 50	16	15 17	16	16 15	Swedish.	A. S. O. K., Copenhagen	333 6	53 4	25 2	Vladiv, U. S. S. R.	Rotterdam, Holland.	Soya beans.	5,902	5,870	3,979
Durazzo.	16	2 00	16	8 30	16	17 30.			German.	Hamburg-American Line	227 5	34 4	15 0	Guayaquil, Ecuador.	Cristobal, C. Z.	General.	1,057	1,632	1,041
Mercier.	15	23 00	16	8 45	16	18 00	18	20 05	Belgian.	Cie. Maritime Belge.	462 2	90 7	27 3	Vancouver, B. C.	Rotterdam, Holland.	General.	10,087	8,771	6,292
Brighton.	16	11 20	16	11 56	16	19 30	16	19 30	British.	Dale & Co.	409 6	54 0	25 0	Vancouver, B. C.	Antwerp, Belgium.	Wheat, oats.	8,198	5,729	4,102
Washington.	16	17 45	16	18 25	17	11 20	18	7 20	French.	French Line.	470 3	61 2	25 5	Vancouver, B. C.	Le Havre, France.	General.	7,423	10,332	7,475

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

* Launch.

* Motor ship.

* Tanker.

PORT OF CRISTOBAL.

* ARRIVALS.

* DEPARTURES.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 2.....	Asheville ¹⁰	U. S. Navy.	Nicaragua.	May 10.....	No. 670-M ¹¹	Pan American Airways.	Miami via wayports.
May 10.....	Tela.....	United Fruit Co.	Port Limon.	May 10.....	Tela.....	United Fruit Co.	New Orleans, La.
May 10.....	No. 9670 ¹¹	Pan American Airways	San Salvador and waypts.	May 10.....	Cristobal.....	Panama R. R. S. S. Line	New York via Haiti.
May 11.....	La Emperatriz ¹²	George Rivers.	Bluefields, Nicaragua.	May 10.....	Tillie Lykes.....	Lykes Brothers S. S. Co.	Sia. Domingo via waypts.
May 11.....	Darien C-35 ¹²	Seadta Airplane Co.	Barranquilla via waypts.	May 10.....	No. 144-M ¹¹	Pan American-Grace Airways	Puerto Cabezas, Nic.
May 11.....	Magdalena.....	Hamburg-American Line.	Have via wayports.	May 11.....	Asheville ¹⁰	U. S. Navy.	San Salvador and waypts.
May 12.....	Pellerin de la Touche	French Line.	Cartagena, Colombia.	May 13.....	No. 9670 ¹¹	Pan American Airways.	Miami via wayports.
May 12.....	Sixola.....	Pan American-Grace Airways	Pimentel via wayports.	May 13.....	No. 669-M ¹¹	Pan American Airways.	New York via Kingston.
May 12.....	No. 144-M ¹¹	Pan American Airways	Colon, Rep. of Panama.	May 13.....	Sixola.....	United Fruit Co.	Colon, Rep. of Panama.
May 12.....	Inapaquina ¹³	A. Tagaropoulos	Colon, Rep. of Panama.	May 13.....	Anachucua ¹³	A. Tagaropoulos	Colon, Rep. of Panama.
May 13.....	Anachucua ¹³	A. Tagaropoulos	New York via Kingston.	May 13.....	Inapaquina ¹³	Hamburg-American Line.	Port Limon, Costa Rica.
May 13.....	Zacapa.....	United Fruit Co.	New Orleans, La.	May 13.....	Magdalena.....	United Fruit Co.	Port Limon via Bocas.
May 13.....	No. 668-M ¹¹	Pan American Airways	Miami via wayports.	May 14.....	Irona.....	Pan American-Grace Airways.	Pimentel via wayports.
May 13.....	No. 9685 ¹¹	Pan American Airways	San Salvador and waypts.	May 14.....	Zacapa.....	United Fruit Co.	Colombian ports.
May 14.....	Bolivar.....	Colombian S. S. Line.	New York via Habana.	May 14.....	Pellerin de la Touche	French Line.	Have via wayports.
May 15.....	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans via Habana.	May 15.....	Darien C-35 ¹¹	Seadta Airplane Co.	Barranquilla via waypts.
May 15.....	A. G. Leonet ¹²	W. W. Miller and L. Berry	Bluefields, Nicaragua.	May 15.....	Tolosa.....	Colombian S. S. Line.	New York via Kingston.
May 15.....	Darien.....	Leyland S. S. Line.	Liverpool via wayports.	May 15.....	La Emperatriz ¹²	George Rivers	Bluefields, Nicaragua.
May 16.....	Juan Sebastian Elcano	Hamburg-American Line.	Port Limon, Costa Rica.	May 15.....	Pearl Marie ¹²	G. I. Bryan	Bluefields, Nicaragua.
May 16.....	No. 670-M ¹¹	Pan American Airways	Miami via wayports.	May 16.....	Annetta I. ¹³	P. W. Hamilton	Colon, Rep. of Panama.
May 16.....	No. 9664 ¹¹	Pan American Airways	San Salvador and waypts.	May 16.....	Carmelia ¹²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 16.....	No. 300-N ¹²	Pan American-Grace Airways.	Pimentel via wayports.	May 16.....	Berta ¹²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 16.....	Pearl Marie ¹²	G. I. Bryan.	Colon, Rep. of Panama.	May 16.....	Cefalu.....	Standard Fruit & S. S. Co.	New Orleans and waypts.
May 16.....	Annetta I. ¹³	P. W. Hamilton.	Colon, Rep. of Panama.				
May 16.....	Carmelia ¹²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.				
May 16.....							

¹⁰ Gunboat. ¹¹ Air mail carrier. ¹² Motor schooner. ¹³ Motor boat. ¹⁴ PORT OF BALBOA.

May 12.....	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 12.....	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 13.....	Nora ¹	Arrow Oil Co.	Los Angeles, Calif.	May 14.....	Nora ¹	Arrow Oil Co.	Los Angeles, Calif.
May 15.....	Nueva Panama ¹⁵	Hans Elliot.	Panama Bay, R. P.	May 15.....	Nueva Panama ¹⁵	Hans Elliot.	Panama Bay, R. P.
May 15.....	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 15.....	Real ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 15.....	Sambu ¹⁴	Hans Elliot.	Panama Bay, R. P.	May 15.....	Sambu ¹⁴	Hans Elliot.	Panama Bay, R. P.
May 15.....	A. B. de Obarrio ¹⁴	A. Valdez.	Panama Bay, R. P.	May 15.....	A. B. de Obarrio ¹⁴	A. Valdez.	Panama Bay, R. P.
May 15.....	El Libertador ¹⁴	A. Valdez.	Panama Bay, R. P.	May 15.....	El Libertador ¹⁴	A. Valdez.	Panama Bay, R. P.

* Other than ships passing through the Canal.

¹ Tanker. ¹⁴ Motor schooner. ¹⁵ Motor ship.

Fresh Fruit Shipments from the United States Increase Heavily.

Fresh fruit shipments from the west coast of the United States totaled 210,553 tons in the past 7 months (October, 1930 to April, 1931, inclusive), showing the heavy increase of approximately 157 per cent over fresh fruit shipments from this area in the corresponding 7 months in 1929-1930. Of the total of 210,553 tons, 197,009 tons, or over 93 per cent, were destined to European ports. Of the total bound for Europe, 61,380 tons were not segregated by country of destination in the reports submitted; of the 135,629 tons for Europe definitely classified 56,639 tons went to Great Britain, 47,024 tons to Germany, 23,444 tons to Holland, and 8,522 tons were distributed among Norway, Sweden, Denmark, Belgium, France, and Italy.

The remaining 13,544 tons, or 7 per cent, of the total fresh fruit tonnage originating on the west coast of the United States during the past 7 months was destined as follows: 7,220 tons to the east coast of the United States, 5,587 tons to South America, 716 tons to Cristobal, and 21 tons to the West Indies.

The total fresh fruit shipments originating in the Pacific areas in the past 7 months totaled 224,158 tons, in comparison with 96,154 tons in the corresponding period in 1929-1930. Those from ports of the United States in the past 7 months were approximately 94 per cent of the total.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 16, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal	Panama R. R. S. S. Line		May 10.		781
Tillie Lykes	Lykes Brothers		May 10.		59
Tela	United Fruit Co.	May 10.	May 10.	30	385
Cauca.	National Navigation Co.	May 10.		162	
Odenwald.	Hamburg-American Line	May 10.	May 11.	62	51
Corinto.	Panama Mail S. S. Co.	May 10.		936	
City of San Francisco.	Panama Mail S. S. Co.		May 11.		121
Santa Maria.	Grace Line	May 11.	May 12.	140	118
Nosa Prince.	N. O. & S. A. S. S. Co.	May 12.	May 12.	(¹)	65
Donau.	North German Lloyd.	May 12.	May 12.	3	202
Bennekom.	Royal Netherlands S. S. Co.	May 12.	May 13.	116	139
Magdalena.	Hamburg-American Line	May 12.	May 13.	124	(²)
Sixaola.	United Fruit Co.	May 12.	May 13.	361	704
Pellerin de la Touche.	French Line	May 12.	May 14.	165	290
Salvador.	Pacific Steam Navigation Co.		May 13.		626
Iriona.	United Fruit Co.	May 13.	May 13.	737	64
Teno.	Chilean S. S. Line	May 13.	May 13.	4	(²)
Erlangen.	North German Lloyd.	May 13.	May 13.	142	297
Lochgail.	Pacific Steam Navigation Co.	May 13.	May 13.	(¹)	223
Kwansai Maru.	Osaka Shosen Kaisha	May 13.	May 14.	156	78
Zaeapa.	United Fruit Co.	May 13.	May 14.	599	464
Santa Clara.	Grace Line	May 14.	May 14.	201	71
Suriname.	United Fruit Co.	May 14.	May 15.	1,239	(²)
Bolivar.	Colombian S. S. Line.	May 14.	May 15.	37	395
West Camargo.	McCormick S. S. Co.	May 14.	May 15.	19	32
Hague Maru.	Osaka Shosen Kaisha.	May 14.	May 15.	17	(²)
California.	Navigazione Libera Triestina.	May 14.	May 15.	(¹)	85
Indiana.	French Line.	May 14.	May 15.	726	(²)
Seattle.	Hamburg-American Line.	May 14.	May 15.	106	154
Laguna.	Pacific Steam Navigation Co.	May 14.	May 14.	(¹)	58
La Imperatriz.	George Rivers.		May 15.		48
Tolca.	United Fruit Co.	May 15.	May 15.	310	62
Cefalu.	Standard Fruit & S. S. Co.	May 15.	May 16.	488	359
San Anselmo.	States S. S. Line.	May 15.	May 15.	181	(²)
Darian.	Leyland S. S. Line.	May 15.		721	
A. G. Leonet.	Miller & Berry.	May 15.		37	
Taranger.	Westfal, Larsen & Co.	May 16.	May 16.		44
Juan Sebastian Elcano.	Spanish S. S. Line.	May 16.		134	
Bodegraven.	Royal Netherlands S. S. Co.	May 16.		151	
Durazzo.	Hamburg-American Line	May 16.		1,657	
Magdalena.	Hamburg-American Line	May 16.		26	
Manizales.	Hamburg-American Line.		May 16.		238
Santa Teresa.	Grace Line	May 16.	May 16.	151	11
Pearl Marie.	R. Feuillebois.	May 16.	May 16.	(¹)	40

¹ No cargo discharged.² No cargo laded.³ One package.

Navigation Regulations.—Supplement No. 3 to Chapter XII, Vessel Inspection Service, of Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

REGULATION 159.30 is to be amended as follows:

In last sentence after the word "experience" insert the words "as licensed officer."

REGULATION 159.53 is to be amended as follows:

Subparagraph (8), after the word "vessels" substitute "." for ";" and strike out "or;" also strike out subparagraph (9).

REGULATION 159.54 is to be amended as follows:

Subparagraph (7), after the word "service" (2d line) insert the words "as licensed officer," and after the word "vessels" substitute "." for ";" and strike out the word "or." Also strike out subparagraph (8).

REGULATION 159.57 is to be amended as follows:

Subparagraph (4), change the word "or" to "and."

REGULATION 159.58 is to be amended as follows:

Strike out subparagraph (4) and renumber subparagraphs (5) and (6) to (4) and (5), respectively.

REGULATION 159.59 is to be amended as follows:

Strike out subparagraph (4) and renumber subparagraphs (5) and (6) to (4) and (5), respectively.

REGULATION 159.60 is to be amended as follows:

Strike out subparagraph (3) and renumber subparagraphs (4), (5), (6), and (7) to (3), (4), (5), and (6), respectively.

REGULATION 160.3, as contained in Supplement No. 2, dated October 14, 1929, is to be amended as follows:

Strike out the words "and safety" in the 3d line and the word "and" in last line; substitute "," for "." at end of sentence and add "and safety valves to be set to working pressure."

REGULATION 162.15 is to be amended as follows:

Strike out the word "self-propelled" in lines 1 and 2, and substitute "100" for "500," 2d line.

REGULATION 162.16 is to be amended as follows:

Strike out words "and manning" in 3d line.

REGULATION 162.36 is to be amended as follows:

In line 4, change "Rule 2" to "Rules 1 and 2."

REGULATION 162.76 is to be amended as follows:

Line 16, after the word "extinguishers" substitute "," for ";" and strike out "2½ gallons each," substituting therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.77 is to be amended as follows:

Line 14, after the word "extinguishers" substitute "," for ";" and strike out "2½-gallon capacity on berth deck," substituting

therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.78 is to be amended as follows:

Line 10, after the word "extinguishers" substitute "," for ";" and strike out "2½-gallon capacity," substituting therefor the words "type, capacity, and location as approved by the Board of Local Inspectors."

REGULATION 162.81 is to be amended as follows:

Between lines 12 and 13 insert "2 fire extinguishers, foam type."

REGULATION 162.82 is to be amended as follows:

After the words "extinguishers" insert "," and strike out remainder of paragraph, substituting therefor the words "number, type, capacity, and location as approved by the Board of Local Inspectors."

H. BURGESS,
Governor.

Navigation Regulations.—Supplement No. 20, Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

REGULATION 3.1, contained in Supplement No. 15 of April 25, 1929, is hereby amended to read as follows:

REGULATION 3.1. *Load and Trim:* All vessels must be properly trimmed before entering the Canal. They should be on an even keel or with a slight drag aft. Any vessel with a list between three degrees and ten degrees, or that is down by the bow to such an extent as to affect its maneuverability, or that is so loaded as to make it unwieldy in the Canal, will be denied transit until the Master, in the presence of the Pilot, has signed a certificate relieving The Panama Canal of all responsibility for any damage that may be sustained by said vessel or by Panama Canal structures or equipment as a result of such condition. A vessel with a list of more than ten degrees will be denied transit. All cases of vessels with considerable trim by the bow should be referred to the Port Captain concerned with Pilot's recommendation before beginning transit.

REGULATION 18.1 is hereby established:

REGULATION 18.1. Rule 18 shall not be interpreted as authorizing vessels less than 65 feet in length, or barges or rafts of any size not on regular transit schedule and not paying tolls, to navigate the waters of any locks or of Gaillard Cut to or from Gatun Lake in partial transit of the Canal; specific authority of the Governor must be obtained through the Marine Superintendent for each such partial transit. In this connection see Rule 49 and Regulation 49.1.

REGULATION 26.1, contained in Supplement No. 10 of June 27, 1928, is amended as follows:

In subparagraph (b), 4th line, strike out the words "to follow" and substitute the word "with." In subparagraph (e), after last sentence, add new sentence: "In this connection see Regulation 18.1."

REGULATION 41.4 is hereby established:

REGULATION 41.4. *Towing Lines for Vessels Carrying Crude Oil Products*: Vessels used for carrying volatile crude oil products with flash point below 73 degrees, and other liquids or solids giving off highly inflammable gases, whether with cargo or in ballast—unless gas-free in ballast—will be required to use insulated towing gear supplied by The Panama Canal, for which an extra charge will be made.

REGULATION 47.12, contained in Supplement No. 2 dated May 12, 1926, is to be renumbered Regulation 47.10, and amended as follows:

After the words "15th Naval District" change period to comma and add the following: "and except that vessels arriving at either terminal port which are to transit the Canal will be allowed alongside the terminal docks, provided the explosives are properly stowed in space which need not be opened while the vessel is alongside."

Also after the words "explosive anchorage" in the 11th and 12th lines strike out period and add "to be provided by the Port Captain or consignee, for final disposition, as occasion warrants, and as previously arranged. Unloading at Panama Canal docks will be permitted only upon specific authority of the Governor which must be obtained in each case."

Strike out last sentence which reads "The lighters will be unloaded at the Cristobal Dock, or, in case of request at the Mine Dock."

Also renumber Regulation 47.9 to Regulation 47.7, Regulation 47.10 to Regulation 47.8, Regulation 47.11 to Regulation 47.9, Regulation 47.13 to Regulation 47.11, and Regulation 47.14 to Regulation 47.12.

REGULATION 64.1 is hereby established as follows:

REGULATION 64.1. A white light with fresnel or fluted lens not less than 3 inches in diameter will be considered as complying with light mentioned in Rule 64 (c).

REGULATION 65.1 is hereby established as follows:

REGULATION 65.1. A white light with fresnel or fluted lens not less than 3 inches in diameter will be considered as complying with light mentioned in Rule 65 (b).

REGULATION 171.1 is amended as follows:

Add the following sentence: "Vessels approaching the Canal

from the Pacific, in addition to the above, shall report time of passing Cape Mala and the speed being made good."

REGULATION 174.1, as contained in Supplement No. 3 dated September 3, 1926, is to be changed to read as follows:

REGULATION 174.1. *Routing of Messages:* Messages will be sent to Colon Radio Station, call letters "NAX," when in the area to the northward of a point 25 miles south of the Pacific entrance of the Canal, in the Canal, or in the area outside the Atlantic entrance of the Canal. Ships in the Pacific when more than 25 miles from the Pacific entrance of the Canal will route messages via Cape Mala Radio Station, call letters "NGR," from which station messages will be relayed to the Canal Zone or the Republic of Panama by telegraph.

In Chapter XV make the following changes:

Paragraph 8 (page 65), under sketches of signals, change numerals "1," "2," and "3" to words "one," "two," and "three," and change capitals "N's" and "S's" in "northbound" and "southbound," respectively, to small "n's" and "s's."

Paragraph 18 (page 68), line 2, after the word "equipment" insert the words "(including radio)."

Paragraph 25 (page 68), substitute comma for period and add "but will be used only in Canal Zone waters except in cases where great emergency exists, such emergency to be determined by the Marine Superintendent."

Paragraph 42 (page 70), strike out "Colon" and substitute "Cristobal, Balboa."

Paragraph 43 (page 70), after last sentence add "There is also an air mail service to and from the United States, Central and South America, arrivals and departures of which may be found in the daily press."

Supplement No. 1, dated April 1, 1926, is to be corrected as follows:

Interchange lower "section" views of Figures 1 and 2 on pages 2 and 3, respectively, to correspond with "plan" views above them.

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 16, 1931.

No. 887.

Colombia, approaches to Cartagena, buoys reported replaced.—The master of the British S. S. *Darian* reports that on May 14, 1931, the following buoys were replaced in Cartagena Harbor:

BOCA CHICA ENTRANCE BUOYS.—Both buoys in position and lighted.
CARREYA SHOAL LIGHT BUOY.—In position and lighted.
SANTA CRUZ BANK LIGHT BUOY.—In position and lighted.

H. BURGESS,
Governor.

Insurance Business in the Canal Zone, Calendar Year, 1930.

Eight insurance companies transacted business in the Canal Zone in 1930. All companies licensed for 1929, except the Home Life Insurance Company, renewed their licenses during the year. The business is summarized as follows:

MISCELLANEOUS COMPANIES.

	Premiums received in 1930.	Losses paid in 1930.
Property damage and collision		
Accident	\$4,530.04	\$561.91
Automobile liability	6,254.03	1,355.45
Fidelity	1,690.13	470.99
Fire	4,155.62	
Health	1,679.46	534.33
Liability other than automobile	14,938.06	4,046.10
Burglary and theft	40.70	
Automobile property damage	1,707.41	994.34
Surety	7,951.48	430.23
Plate glass	145.21	289.00
Automobile collision	538.11	43.11
Total	43,630.25	9,030.46

Premium tax paid in Canal Zone, \$655.95.

LIFE INSURANCE COMPANIES.

	Number.	Amount.
Policies in force, December 31, 1929	462	\$1,419,088.00
Policies issued during 1930	163	485,019.00
Total	625	1,904,107.00
Policies lapsed during 1930	51	162,582.00
Policies in force, December 31, 1930	574	1,741,025.00
Losses and claims unpaid, December 31, 1929		
Losses and claims incurred during 1930	4	10,500.00
Total	4	10,500.00
Losses and claims settled during 1930	2	7,536.44
Losses and claims unpaid on December 31, 1930	2	2,963.56
Premiums collected during 1930		59,235.80
Premium tax paid in Canal Zone		893.13

The relatively small amount of fire insurance business written is due to the fact that there are few structures in the Canal Zone outside of those owned by the Government of the United States, and none of such property is covered by fire insurance.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Official Publications of Interest to Shipping.

Masters may obtain from the office of the Captain of the Port, at either Cristobal or Balboa, without charge, the "Rules and Regulations Governing Navigation of The Panama Canal and Adjacent Waters," and the current Tariff of charges at the Canal for supplies and services.

Requests for Canal publications sent by mail should be addressed to: The Panama Canal, Balboa Heights, C. Z.; or, when more convenient, to The Panama Canal, Washington, D. C.

The Hydrographic Office at Cristobal maintains at all times a complete stock of navigational charts and books, including charts of all parts of the world, sailing directions of the world, nautical tables, light lists, tide tables, nautical almanacs, etc.

At the office of the Port Captain in Balboa, a limited stock of navigational charts, books, etc., is also carried, and this office is in a position to fill practically any order in this connection that a ship might place.

Copies of current issues of Pilot Charts, Notices to Mariners, and Hydrographic Bulletins may be obtained in return for marine information.

Observations of weather, ocean currents, and other marine data collected, and blanks, instructions, barometer comparisons, etc., furnished.

Correct time is maintained and chronometers rated.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 16, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.09
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.23
Oakum, Navy, unspun	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.16

Coal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

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Volume XXIV. Balboa Heights, C. Z., May 27, 1931. No. 43.

CANAL WORK IN APRIL, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of April, 1931.

BALBOA HEIGHTS, C. Z., May 18, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of April, 1931:

TRANSITS AND TOLLS.

During the month, 453 commercial vessels and 17 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 32 vessels belonging to the United States Government and 1 transit of a Panamanian Government vessel, on which no tolls were collected, making a total of 503 transits for the month, or a daily average on all traffic of 16.77.

Tolls on the 453 commercial vessels amounted to \$2,014,349.13, and on the launches to \$64.50, a total of \$2,014,413.63, or a daily average on all traffic of \$67,147.12.

In comparison with April, 1930, commercial traffic for the past month declined 36 transits and \$218,413.87 in tolls, or 7.4 per cent and 9.8 per cent, respectively. In comparison with the previous month, traffic for the past month showed a slight increase—14 transits and \$49,914.91 in tolls, or 3.1 per cent and 2.5 per cent, respectively.

Commercial traffic for the first 10 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.1 per cent in transits, 6.6 per cent in net tonnage (Panama Canal measurement), 16.5 per cent in cargo passing through, and 8.4 per cent in tolls assessed.

The total numbers of craft of all kinds transiting the Canal during the month of April in the two preceding years and in 1931 are shown in the following tabulation:

	April, 1929.	April, 1930.	April, 1931.
Commercial vessels.....	540	489	453
Launches (under 20 tons).....	41	7	17
Noncommercial vessels:			
United States Government.....	40	43	32
Panamanian Government.....	3	1	1
For repairs.....	3	1	1
Total.....	627	541	503

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	10	15	25
Pedro Miguel.....	23	26	49
Miraflores.....	23	23	46
Total.....	56	64	120

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of April, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,460	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December...	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February...	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March.....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,062.36	1,964,434.22
April.....	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
Total....	5,228	4,701	25,203,744	23,548,641	25,621,435	21,398,372	22,812,996.88	20,900,595.66

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for April in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	April, 1929.	April, 1930.	April, 1931.	Average per month for calendar year 1930.
Number of vessels.....	540	489	453	490
Panama Canal net tonnage.....	2,488,176	2,479,096	2,292,805	2,438,406
United States net tonnage.....	1,899,607	1,849,804	1,686,523	1,826,376
Registered gross tonnage.....	3,127,365	3,075,488	2,814,348	3,025,071
Registered net tonnage.....	1,917,378	1,872,024	1,711,593	1,839,006
Tolls.....	\$2,281,087.27	\$2,232,763.00	\$2,014,349.13	\$2,178,835.41
Tons of cargo carried.....	2,719,668	2,456,782	2,011,117	2,320,662

The average daily number of transits, tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	April, 1929.	April, 1930.	April, 1931.	
Number of transits.....	18.00	16.30	15.10	16.12
Panama Canal net tonnage.....	82,939	82,637	76,427	80,167
Tolls.....	\$76,036.24	\$74,425.43	\$67,144.97	\$71,632.95
Tons of cargo carried.....	90,655	81,893	67,037	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of April in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	April, 1929.	April, 1930.	April, 1931.
Panama Canal net tonnage.....	4,608	5,070	5,061
United States net tonnage.....	3,518	3,783	3,723
Registered gross tonnage.....	5,791	6,289	6,213
Registered net tonnage.....	3,551	3,823	3,778
Tolls.....	\$4,224.24	\$4,565.98	\$4,446.69
Tons of cargo (including vessels in ballast).....	5,036	5,024	4,440
Tons of cargo (laden vessels only).....	5,786	5,713	5,392

NATIONALITY OF VESSELS.

Sixteen nationalities were represented in the commercial traffic through the Canal in April, 1931. Vessels of United States registry, with 194, led in the number of transits, while those flying the British flag, with 110, were second. Vessels of these two nationalities made up 67.1 per cent of the total transits for the month. Vessels of Norwegian and German registry were next with 33 and 25 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of April was 2,011,117 tons, a decrease of 445,665 tons, or 18.1 per cent, in comparison with April, 1930. Cargo from the Atlantic to the Pacific aggregated 553,609 tons, as compared with 499,617 tons for the previous month, and 806,119 tons in April, 1930. From the Pacific there were 1,457,508 tons, as compared with 1,415,890 tons for the previous month, and 1,650,663 tons in April, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 158,638 tons, constituted the heaviest item of cargo, followed by phosphates with 41,291 tons, mineral oils with 41,204 tons, cotton with 32,976 tons, paper with 16,987 tons, sugar with 13,045 tons, and cement with 12,131 tons. There was a decrease of 252,510 tons, or 31.3 per cent, in cargo moving in this direction as compared with April, 1930.

From the Pacific to the Atlantic mineral oils, as in the past, constituted the leading commodity, totaling in April, 1931, 367,931 tons. This was followed by lumber with 194,422 tons, sugar with 144,589 tons, wheat with 123,126 tons, ores (principally iron) with 96,857 tons, and nitrates with 80,729 tons. Sugar shipments via the Canal increased 72,264 tons, or 99.9 per cent, over April 1930, and nitrates increased 9,666 tons, or 13.6 per cent. The other above-listed items decreased as follows in comparison with April, 1930: Mineral oils, 52,321 tons, or 12.4 per cent; lumber, 111,101 tons, or 36.4 per cent; wheat, 43,116 tons, or 25.9 per cent; and ores, 113,618 tons, or 54.0 per cent. In aggregate, there was a decrease of 193,155 tons, or 11.7 per cent, in cargo routed in this direction in comparison with April, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules for measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.906 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.725 per net ton, Panama Canal measurement.

Taking traffic through the Canal for the month of April, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flag:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$4,058.75	\$4,103.00	\$44.25	
British.....	537,621.39	574,398.40	36,777.01	
Chilean.....	1,856.25	17,899.00	2,042.75	
Colombian.....	1,488.33	1,251.40		\$236.93
Danish.....	67,775.20	75,584.00	7,808.80	
Danzig.....	14,756.28	13,158.40		1,597.88
Dutch.....	38,413.75	45,672.00	7,258.25	
French.....	37,441.25	46,393.00	8,951.75	
German.....	69,160.00	83,259.00	14,099.00	
Italian.....	41,018.75	48,228.00	7,209.25	
Japanese.....	111,233.30	107,923.00		3,310.30
Norwegian.....	128,205.14	139,086.60	10,881.46	
Panamanian.....	4,564.40	7,008.40	2,444.00	
Spanish.....	* 1,648.50	* 1,648.50		
Swedish.....	40,475.87	47,282.60	6,806.73	
United States.....	900,631.97	937,279.00	36,647.03	
Total.....	2,014,349.13	2,150,174.30	140,970.28	5,145.11
Net increase on all traffic.....			135,825.17	

* Naval vessel of 3,297 displacement tons.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$23,227.38
United States foreign trade.....	16,353.99
United States-Canal Zone trade.....	2,934.34
^a Total.....	36,647.03

^a Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in April, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit; laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....		1.69	1.69
British.....	.56	1.12	.89
Chilean.....	.41	1.02	.57
Colombian.....	1.35	1.29	1.33
Danish.....	1.08	1.62	1.49
Danzig.....		1.85	1.85
Dutch.....	.39	1.28	.82
French.....	.27	1.36	.95
German.....	.48	1.15	.77
Italian.....	.14	.60	.44
Japanese.....	1.16	1.43	1.29
Norwegian.....	.73	1.43	1.23
Panamanian.....	.56		.56
Swedish.....	.73	2.24	1.53
United States.....	.71	1.40	1.09
Averages, April, 1931.....	.66	1.33	1.04
Averages, April, 1930.....	.84	1.33	1.11
Averages, April, 1929.....	.95	1.45	1.25

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of April is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	2	9,347	\$10,018.75	37	220,206	\$228,249.10
Ballast.....	29	169,176	121,806.72	1	4,997	3,597.84
General cargo ships:						
Laden.....	162	819,249	726,286.30	171	863,542	772,787.05
Ballast.....	40	181,998	132,859.03	2	2,337	1,682.64
Noncargo-carrying ships:						
Dredge.....				1	1,049	755.28
Hull.....				1	20	15.00
Naval.....				1		1,648.50
Passenger.....	1	5,287	3,662.50	1	14,476	10,170.00
Yachts.....	1	86	63.00	3	1,035	747.42
Total.....	235	1,185,143	994,696.30	218	1,107,662	1,019,652.83
Method of propulsion:						
Steam.....	159	788,174	683,113.94	148	729,628	678,547.09
Motor.....	73	396,786	311,408.46	69	378,014	341,090.74
Motor schooner.....	2	151	135.50			
Nonpropelled.....	1	32	38.40	1	20	15.00
Total.....	235	1,185,143	994,696.30	218	1,107,662	1,019,652.83

Of the 307 steam-driven vessels, 228 were oil burning, 73 coal burning, and 6 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of April, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Airplane carriers.....	2	¹ 66,000	\$33,000.00			
Cruisers.....				1	¹ 8,150	\$4,075.00
Destroyers.....	4	¹ 4,860	2,430.00			
Gunboats.....				1	¹ 1,425	712.50
Launches.....	5	¹ 50	37.50			
Minesweepers.....	2	¹ 1,900	950.00	1	¹ 950	475.00
Submarines.....	3	¹ 2,745	1,372.50			
Tankers.....				1	¹ 6,258	4,693.50
Transports.....				1	¹ 3,908	4,885.00
Tugs.....	1	¹ 1,000	500.00	1	¹ 1,000	500.00
U. S. Army vessels:						
Dredges.....	1	¹ 1,400	700.00			
River boat.....	1	¹ 700	525.00			
Transports.....	2	¹ 7,816	9,770.00	3	¹ 13,107	15,383.75
Tugs.....	1	¹ 46	34.50	1	¹ 46	34.50
Total, U. S. Government.....	22		49,319.50	10		30,759.25
Vessels for repairs:						
General cargo.....				1	¹ 161	193.20
Grand total.....	22		49,319.50	11		30,952.45

¹ Indicates displacement tonnage. ² Indicates Panama Canal net tonnage. ³ Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of April, 1931, carried cargo as follows: Atlantic to Pacific, 1,443 tons; Pacific to Atlantic, 878 tons; total, 2,321 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of April, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	52	\$48.90
Pacific to Atlantic.....	9	27	15.60
Total.....	17	79	64.50

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of April, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	102,208	39,166	141,374
Local cargo shipped..... tons..	7,882	811	8,693
Transit cargo arriving..... tons..	1,999,163	1,978,839	3,978,002
Transit cargo clearing..... tons..	1,991,561	1,987,709	3,979,270
Cargo received for transshipment..... tons..	25,774	564	26,338
Cargo transhipped..... tons..	28,194	560	28,754
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	140	33	173
Number of releases issued.....	740	94	834
Tons received.....	1,371	397	1,768
Tons withdrawn.....	1,457	377	1,834
Packages received.....	6,980	1,001	7,981
Packages withdrawn.....	7,950	1,955	9,905
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	30		30
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	15,266		15,266
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	66	7	73
U. S. Army, including vessels..... tons..	30		30
Panama Railroad Company..... tons..		11	11
Individuals and companies, including galley coal..... tons..	150	62	212
Transferred to Navy..... tons..	80		80
Total sales and issues..... tons..	15,592	80	15,672

		Cristobal.	Balboa.	Total.
Coal on hand, April 1, 1931.....	tons	39,577		39,577
Coal on hand, May 1, 1931.....	tons	53,629		53,629
Coal received during month.....	tons	29,644		29,644
Coal received from Navy.....	tons		80	80
Fuel oil issued from Panama Canal tanks:				
Panama Canal departments.....	bbls	7,919.60	14,151.75	22,071.35
Panama Railroad Company.....	bbls	901.86	532.33	1,434.19
U. S. Army and Navy.....	bbls	484.50	856.03	1,340.53
Individuals and companies.....	bbls		409.19	409.19
Total sales and issues.....	bbls	9,305.96	15,949.30	25,255.26
Fuel oil on hand, May 1, 1931.....	bbls	55,997.95	27,327.32	83,325.27
Diesel oil borrowed from Union Oil Company.....	bbls	254.89		254.89
Diesel oil issued and sold during April, 1931.....	bbls	254.89	2,078.30	2,333.19
Diesel oil repaid to Union Oil Company.....	bbls		449.58	449.58
Diesel oil on hand, May 1, 1931.....	bbls	1,083.28	30,122.25	31,205.53
Miscellaneous transfers.....	bbls	32,558.88	586.18	33,145.06
Gasoline and kerosene pumped for The Panama Canal.....	bbls	2,799.20	5,334.00	8,133.20
Gasoline pumped for individuals and companies.....	bbls	680.86	7,970.30	8,651.16
Oil pumped for individuals and companies:				
Receipts.....	bbls	341,896.95	154,777.66	496,674.61
Issues.....	bbls	228,030.80	202,339.72	430,370.52
Oil pumped for U. S. Navy.....	bbls	5,557.00	37,534.00	43,091.00
Total fuel oil, gasoline, and kerosene handled.....	bbls	621,084.54	426,569.46	1,047,654.00
Admeasurement of vessels:				
U. S. equivalent certificates issued.....		11	6	17
Measured for Panama Canal net tonnage.....		2	2	4
Remeasured for Panama Canal net tonnage.....		4	4	8
Panama Canal net tonnage corrected.....		4	5	9
U. S. equivalent tonnage corrected.....		6	5	11
Services of harbor equipment:				
Tugs, total operating hours.....		308½	285½	594
Launches, total operating hours.....		1,271½	1,478	2,749½
Revenue from tug service, pilotage, etc.:				
Tug revenue.....		\$10,196.25	\$7,227.50	\$17,423.75
Pilotage.....		17,078.00	7,681.00	24,759.00
Seamen.....		10,896.00	10,140.00	21,036.00
Launch service.....		1,821.50	2,671.50	4,493.00
Wharfage.....		14,389.30	5,776.02	20,165.32
Ships measured.....		40.00	15.00	55.00
Miscellaneous.....		396.33	312.50	708.83
Ships repaired at Panama Canal shops:				
Commercial.....		38	6	44
U. S. Army and Navy.....		8	4	12
Panama Canal equipment.....		9	9	18
Total.....		55	19	74
Vessels dry-docked:				
Commercial.....		4		4
U. S. Army and Navy.....		1	2	3
Panama Canal equipment.....		2	5	7
Total.....		7	7	14
Clearances issued.....		267	238	505
Bills of health issued.....		283	247	530

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal.	515	3,291,033	2,037,886	468	2,923,681	1,805,808
Vessels entering port but not transiting Canal.	64	345,140	206,094	4	26,267	14,730
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	118	729,290	430,651	98	640,495	384,771
<i>Ships clearing.</i>						
All vessels, including those transiting Canal.	512	3,282,220	2,028,807	470	2,969,233	1,846,894
Vessels clearing port but not transiting Canal.	63	348,744	203,704	5	23,002	12,534
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	113	696,401	411,500	97	628,004	376,851

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports.....	871	729	1,600	132	377	509
From Pacific ports.....	277	183	460	336	161	497
Total disembarking.....	1,148	912	2,060	468	538	1,006
Embarking:						
For Atlantic ports.....	1,079	798	1,877	152	317	469
For Pacific ports.....	149	168	317	275	271	546
Total embarking.....	1,228	966	2,194	427	588	1,015
Remaining on board:						
From Atlantic to Pacific ports.....	1,117	1,370	2,487	1,198	1,217	2,415
From Pacific to Atlantic ports.....	2,275	2,140	4,415	2,320	2,253	4,573
From Atlantic to Atlantic ports.....	1,086	121	1,207			
From Pacific to Pacific ports.....				10	76	86
Total remaining on board.....	4,478	3,631	8,109	3,528	3,546	7,074
Total arriving.....	5,628	4,543	10,169	3,996	4,084	8,080
Total departing.....	5,706	4,597	10,303	3,955	4,134	8,089

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Passenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	235	62	26.4
Pacific to Atlantic.....	218	66	30.3
Total.....	453	128	28.3

In addition to the aforesaid, 52 passenger-carrying vessels called at the port of Cristobal, and 1 at Balboa without transiting the Canal, making a total of 181 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of April, 1931, 36 commercial airplanes entered and 42 cleared at Cristobal, and 1 entered and cleared at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of April, 1931, together with the total sales in the corresponding months in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels.....	\$1,080.65	\$8,648.93	\$14,977.46	\$191.59	\$6,098.18	\$30,996.81
Government vessels.....	134.80	1,883.33	11,304.61	7.09	1,064.28	14,394.11
P. R. R. vessels.....	3.60	300.50	197.78	469.13	10.20	981.21
Total sales, April, 1931.....	1,219.05	10,832.76	26,469.85	667.81	7,172.66	46,372.13
Total sales, April, 1930.....	2,254.57	13,204.68	36,038.35	821.43	7,392.27	59,711.30
Total sales, April, 1929.....	3,483.25	16,972.62	48,163.53	1,03.30	9,482.32	79,139.02
Sales at Balboa to:						
Commercial vessels.....	362.17	3,640.46	10,365.88	545.45	6,626.08	21,540.04
Government vessels.....	269.32	11,049.01	6,218.07	138.55	1,450.07	19,125.02
P. R. R. vessels.....				37.78		3.78
Total sales, April, 1931.....	631.49	14,689.47	16,583.95	721.78	8,076.15	40,702.84
Total sales, April, 1930.....	1,021.78	5,856.22	43,842.09	1,393.65	13,528.21	65,641.95
Total sales, April, 1929.....	1,374.55	13,343.59	39,350.48	825.07	5,208.25	60,101.94

The aggregate sales to Government vessels during the month was \$33,519.13; to Panama Railroad vessels, \$1,018.19; and to other commercial vessels, \$52,536.85; making the total sales to all vessels, \$87,074.97. These figures are subject to minor change on final audit.

LOCK OPERATIONS.

The overhaul of the Gatun Locks, which was begun on January 7, 1931, was completed on April 9, and normal operation from 7 a. m. to 11 p. m. was resumed on April 11. During the overhaul these locks were operated on a 24-hour basis.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of April, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. ¹			April, 1929.	April, 1930.	April, 1931.
	North.	South.	Total.	North.	South.	Total.			
Gatun.....	209	217	426	9	10	19	514	487	445
Pedro Miguel.....	214	226	440	11	17	28	507	505	468
Miraflores.....	214	225	439	10	14	24	510	498	463
Number of vessels put through locks.									
Gatun.....	218	234	452	37	46	83	642	563	535
Pedro Miguel.....	218	233	451	46	49	95	681	570	546
Miraflores.....	218	233	451	46	43	89	686	568	540

¹ Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	34	35	32
Panama Canal equipment.....	25	49	46
Launehes (under 20 tons).....	23	10	10
Vessels for repairs.....	1	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in April, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages.....	1,392,070,000	1,034,240,000	1,033,980,000
Leakage.....	30,000,000	25,000,000	20,000,000
Maintenance.....	42,740,000		
Total, April, 1931.....	1,464,810,000	1,059,240,000	1,053,980,000
Total, March, 1931.....	1,822,210,000	1,275,160,000	1,304,570,000
Total, April, 1930.....	1,512,870,000	1,361,520,000	1,347,130,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of April, 1931, are shown in comparative form in the following tabulation:

	April.		April—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>	<i>C. f. s.</i>
Discharge of Chagres River at Alhajuela.....	951	800	3,140	281	979
Maximum momentary discharge for the month.....	1,884	4,226	29,200	240	.....
Gatun Lake watershed, total yield.....	1,890	1,252	6,263	305	1,844
Gatun Lake watershed, net yield.....	1,216	493	5,400	—706	990
Draft on Gatun Lake for lockages and power.....	2,136	2,573	2,648	2,019	2,198

¹ April, 13, 1915.

² 1914 not included.

³ Hydroelectric plant carrying full power load.

The monthly mean discharge of the Chagres River at Alhajuela for April, 1931, was 800 c. f. s., which is 18 per cent below the 30-year average of 979 c. f. s. The maximum monthly mean discharge on record for April is 3,140 c. f. s. in 1910, and the minimum is 281 c. f. s. in 1926. The maximum momentary discharge for the month was 4,226 c. f. s. at elevation 94.52 feet on the 26th, and the minimum was 428 c. f. s. at elevation 91.51 feet on the 17th. The maximum momentary discharge on record for April is 29,200 c. f. s. at elevation 102.35 feet on April 3, 1915, and the minimum is 240 c. f. s. at elevation 90.20 feet on April 30, 1920.

Gatun Lake varied in elevation during April from a maximum of 83.76 feet on the 1st to a minimum of 82.53 feet on the 30th. The total yield of Gatun Lake watershed was 1,252 c. f. s., which is 32 per cent below the 18-year April average. The maximum total yield on record for April is 6,263 c. f. s. in 1915, and the minimum is 305 c. f. s. in 1926.

Miraflores Lake varied in elevation between a maximum of 54.34 feet on the 5th, and a minimum of 53.00 feet on the 16th. The mean elevation for the month was 53.68 feet and at midnight on the 30th the lake elevation was 53.68 feet.

SEISMOLOGY.

Four seismic disturbances were registered during the month—on the 10th, 13th, 19th, and 24th. The disturbance of the 10th was felt distinctly in La Palma, Republic of Panama.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,544,700 kilowatt hours, and the computed water consumption was 4,199,427,144 cubic feet. Continuous service was maintained throughout the month. The Miraflores Diesel-electric station had a gross generator output of 7,200 kilowatt hours, and the fuel oil consumption was 23.38 barrels. This station was operated only on standby and peak-load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 31 vessels during the month. There were 400 work orders issued during the month, as compared with 339 issued during the previous month.

MECHANICAL DIVISION.

During the month of April, 1931, miscellaneous repairs were made on 55 vessels at Cristobal and 19 at Balboa. Seven vessels were dry-docked at Cristobal and 7 at Balboa. The dipper dredge *Cascadas* of the Dredging Division was docked for general overhaul during the month. The United States Navy's minesweeper *Mallard* entered Balboa shops for docking and general overhaul. Minor repairs were completed on the U. S. S. *Salinas* and tug *Sciota*.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 10,535 cubic yards were excavated and utilized in connection with grading; 2,018 cubic yards of rock were crushed; and concrete bridge was completed at station No. 148.

The Paraiso-Summit cutoff was completed and opened to traffic during April. Work on several improvement projects in the cities of Colon and Panama, and in the Canal Zone, was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 772,671,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average movement of 0.7 foot toward the Canal between stations 1778-00 and 1792-00 W., and 0.3 foot southward between stations 1778-00 and 1783-00 W. A dredge worked 14 days on east and west Culebra slides removing 24,450 cubic yards. A small break occurred at station 1870-00 E. during the month. There was no interference to shipping on account of slides during the month.

A suction dredge worked from the 1st to 28th in the Folks River borrow pits "Y" and "Z," excavating a total of 164,300 cubic yards of sand, coral, and blue clay, completing the fill on the 28th. This material was pumped to the Colon fill with the assistance of a relay pump barge through an average pipe line length from dredge to relay of 1,615 feet and from the relay to the dump of 5,037 feet, a total of 6,652

feet. The total amount of material removed from the borrow pits to date is 778,100 cubic yards of which 489,100 cubic yards remained in place, giving a runoff of 37.9 per cent. The area of completed fill is 37 acres.

The total excavation during April, 1931, was 1,357,370 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 4.....	8,450	33,800	42,250
Maintenance.....	10,850	1,450	12,300
Canal prism, Gaillard Cut—			
Project No. 3.....	600	5,450	6,050
Project No. 4.....	1,250	4,400	5,650
Project No. 5.....	9,450	32,650	42,100
Maintenance.....	10,700	800	11,500
East and west Culebra slides.....	4,900	19,550	24,450
Canal prism, Pacific entrance—			
Project No. 1.....	223,250		223,250
Maintenance.....	491,650		491,650
Balboa inner harbor—			
Maintenance.....	301,400		301,400
Plant excavation:			
Colon fill.....	164,300		164,300
Auxiliary (M. S. Lockmonar).....	15,750	15,700	31,450
Chame sand service.....	1,020		1,020
Total.....	1,243,570	113,800	1,357,370

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and thirty (1,330) single trips were made, and 234 Panama Canal, 1,507 U. S. Army, and 8,622 other vehicles, a total of 10,365, were ferried across the Canal. This is the largest number of vehicles transported during any month since the operation of the ferry was assumed by The Panama Canal, on October 8, 1927.

MADDEN DAM PROJECT.

The area above the dam site which was cleared and grubbed in order to determine the cost of such work was surveyed and was found to comprise 104.5 acres. The field work of the survey for the upper Pequeni River and Boqueron River flood warning telephone extensions was completed during the month. One station site on the Boqueron River, and two alternative sites on the Pequeni River, each of about 5.7 acres, were monumented and mapped. An alternative station site on the Chagres River was also located, monumented, and mapped. Reports were received from Miraflores laboratory on tests of several tentative mixes of concrete suggested by the Reclamation Bureau. Studies were completed on water supply, sewer system, garbage disposal and electric distribution system for Madden Dam camp. Work of a miscellaneous nature, consisting of surveying, seepage investigations, geological investigations, etc., was continued during the month.

Considerable data were forwarded to the Designing Engineer who is in Denver in consultation with the United States Bureau of Reclamation. This data consisted of rainfall information for Alhajuela, information relative to permanent upper river gauging stations, temperatures of material, air, and water, etc., etc.

The erection of quarters for the Government inspection force was authorized, and the site cleared and rubbish burned. An 8-foot gravel road was built, service roads and building locations were staked out for five cottages, one bachelor quarters, and one mess hall and kitchen.

The concrete footings for the transmission towers, with the exception of the last tower at Alhajuela, were completed. Clearing of the right-of-way was finished, trails and roads for the transportation of steel to the tower sites were completed, and everything was in readiness for the steel, the first shipment of which was scheduled to arrive on May 8.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on April 30, 1931, was 24,057, composed of 8,134 Americans, 2,864 of whom were men, 2,493 women, and 2,777 children; 174 Europeans, 83 of whom were men, 31 women, and 60 children; and 15,749 West Indians, 4,323 of whom were men, 2,820 women, and 8,606 children. The total number of persons in quarters on April 30, 1930, was 22,815.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of April 15, 1931, with a comparison of the working force for the preceding month and for April, 1930:

	Total employees.		As of April 15, 1931.		
	April, 1930.	March, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	153	123	56	64	120
Electrical.....	374	402	170	211	381
Municipal Engineering.....	899	1,225	95	901	996
Lock Operation.....	979	1,925	256	810	1,066
Dredging.....	1,275	1,197	201	996	1,197
Madden Project.....	1,068	402	21	350	371
Mechanical.....	1,417	1,336	470	867	1,337
Marine.....	903	866	196	632	828
Fortifications.....	296	279	19	140	159
Total.....	7,364	7,755	1,484	4,971	6,455
Supply Department:					
Quartermaster.....	2,354	1,805	203	1,547	1,750
Commissary.....	1,554	1,720	238	1,303	1,541
Cattle Industry—Plantations.....	100	216	2	177	179
Hotel Tivoli.....	130	124	8	116	124
Hotel Washington.....	117	108	8	100	108
Transportation.....	338	322	71	238	309
Total.....	4,593	4,295	530	3,481	4,011
Accounting Department.....	209	211	203	6	209
Health Department.....	1,168	1,149	287	825	1,112
Executive Department.....	851	886	551	334	885
Total.....	2,228	2,246	1,041	1,165	2,206
Panama Railroad Company:					
Superintendent.....	348	301	45	246	291
Transportation.....	184	194	61	123	184
Receiving and Forwarding Agency.....	1,427	1,312	80	1,408	1,488
Coaling stations.....	345	282	41	204	245
Total.....	2,304	2,089	227	1,981	2,208
Grand total, April, 1930.....	16,489				
Grand total, March, 1931.....		16,385			
Grand total, April, 1931.....			3,282	11,598	14,880

Additions to the gold force on the Isthmus in April were as follows: Employed in the United States, 4; employed on the Isthmus, 6; reemployed on the Isthmus, 3; total, 13. Separations from the gold force totaled 67, as follows: Resigned, 8; discharged, 56; retired, 2; died, 1. At the end of the month there were on file 825 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 140 deaths occurred during the month of April, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (total population 143,636), which is equivalent to an annual death rate of 11.70 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 24; pneumonia (broncho and lobar), 20; organic diseases of the heart, 11; nephritis (acute and chronic), 7; and diarrhea and enteritis, 6. There was 1 death from typhoid fever and 1 from leprosy. There were 24 deaths among nonresidents, which are not included in the above statistics.

There were 296 live births and 9 stillbirths reported during the month. Including stillbirths, this equivalent to an annual birth rate of 25.48. Deaths among children under 1 year of age numbered 24, giving an infant mortality rate based on the number of live births reported, of 81.08.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 102, of whom 15 were employees (7 white and 8 colored), 7 were members of employees' families (all colored), 9 were Canal Zone agriculturists, 36 were other civilian nonemployees, and 35 were Army and Navy personnel. Of the 22 employees and members of employees' families, 20 were probably infected outside

our sanitized areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There were 3 deaths from malaria among residents, 1 an American soldier, and 2 children, 1 a colored child living in a Canal Zone rural district, and 1 a Panamanian, living in the City of Panama.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$176,286.86, of which \$152,424.09 was for the Department of Operation and Maintenance, and \$23,862.77 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$35,489.79.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of March, 1931, as compared with March, 1930, with the figures for the first 9 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of April at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	March, 1930.	March, 1931.	To end of March.	
			Last year.	This year.
Tolls.....	\$2,260,044.42	\$1,964,240.30	\$20,580,209.14	\$18,885,203.40
Other receipts.....	495,619.70	363,241.37	3,381,400.78	3,156,959.72
Total transit revenues.....	2,755,664.12	2,327,481.67	23,961,609.92	22,042,163.12
Total transit expenses.....	1,252,197.42	1,209,040.80	10,024,949.68	10,552,157.18
Net transit revenues.....	1,503,466.70	1,118,440.87	13,936,660.24	11,490,005.94
Three per cent capital charge....	622,421.62	625,761.56	5,591,231.42	5,634,483.21
Transit surplus.....	881,045.08	492,679.31	8,345,428.82	5,855,522.73
Business revenues.....	1,731,202.23	1,490,480.51	15,053,179.21	13,504,434.39
Business expenses.....	1,615,460.82	1,437,946.84	14,196,556.08	12,895,889.93
Net business revenues.....	115,741.41	52,533.67	856,623.13	608,544.46
Three per cent capital charge.....	63,651.02	66,155.28	603,367.53	613,017.89
Business surplus.....	52,090.39	(13,621.61)	253,255.60	(4,473.43)
Combined revenues.....	4,486,866.35	3,817,962.18	39,014,789.13	35,546,597.51
Combined expenses.....	2,867,658.24	2,646,987.64	24,221,505.76	23,448,047.11
Net revenues.....	1,619,208.11	1,170,974.54	14,793,283.37	12,098,550.40
Three per cent capital charge.....	686,072.64	691,916.84	6,194,598.95	6,247,501.10
Combined surplus.....	933,135.47	479,057.70	8,598,684.42	5,851,049.30

() Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 23, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cauca.....	National Navigation Co.....	May 18.....	May 18.....	55	8
La Plata Maru.....	Nippon Yusen Kaisha.....	May 18.....	May 18.....	.....	.....
Toba Maru.....	Nippon Yusen Kaisha.....	May 18.....	May 19.....	95	2
Guatemala.....	Panama Mail S. S. Co.....	May 20.....	May 21.....	32	.....
La Perla.....	United Fruit Co.....	May 20.....	May 21.....	560	70
Patrick Henry.....	Tampa Intercocean S. S. Co.....	May 20.....	May 21.....	112	.....
Sveadrott.....	Knutsen Line.....	May 21.....	.....	2,872	.....
President Jackson.....	Dollar Line.....	May 22.....	May 22.....	.....	5
Theodore Roosevelt.....	Fred Olsen & Co.....	May 22.....	May 22.....	.....	1
Santa Inez.....	Grace Line.....	May 23.....	May 23.....	41	5

New York State Training Ship Transits Canal.

The training ship *Newport* of the State of New York arrived at Cristobal on May 21, 1931, with 122 cadets aboard in training for the merchant marine service. The vessel transited the Canal on the 23d, and on the 26th cleared from Balboa en route to Bremerton, Wash. The *Newport*, formerly a gunboat of the United States Navy, was loaned by the Government to the State of New York several years ago to be used as a training ship for merchant marine officers. She is 204 feet long, 36 feet beam, and of 1,010 tons displacement. She is in command of Capt. J. H. Tomb, U. S. N., retired, a former Marine Superintendent of The Panama Canal.

Upon arrival at Bremerton the *Newport* will be replaced, for this service, by the U. S. S. *Procyon*, a much larger and more modern vessel, and the *Newport* will be returned to the Navy for decommissioning and sale. The *Procyon* was, until recently, flagship of the Fleet Base Force based at San Pedro, Calif.

The *Procyon* is 390 feet long (401 feet overall), has a beam of 54 feet and her mean draft is 24 feet 5 inches. She is a sister ship of the U. S. S. *Antares* and displaces 11,450 tons; is an oil burner and is fitted with Curtis electric-gearred turbines, giving her a speed of 11½ knots. The *Procyon* was formerly the S. S. *Shaume* and was taken over from the Shipping Board by the Navy in 1921.

Cargo Declarations.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., May 25, 1931.

TO AGENTS AND OWNERS OF VESSELS USING THE PANAMA CANAL:

1. Among the documents required by Regulation 12.1 (*Rules and Regulations Governing the Navigation of the Panama Canal*) to be ready for immediate delivery to the boarding party upon being received at the port of entry, is a cargo declaration.

2. The information contained in the cargo declaration is extremely important for statistical purposes and a report of commodities transiting the Canal, and the directions in which such commodities are moving is prepared from data contained in these cargo declarations.

3. It has come to the attention of this office that not infrequently cargo declarations are not ready for delivery upon arrival of vessels at a terminal port, and in order to eliminate failure to obtain such declarations in the future, the following procedure will be followed in the few cases where such declarations are not ready when the vessel is boarded:

(a) Boarding officer at port of entry will notify Port Captain by means of notation on the information sheet that the cargo declaration has not been furnished.

(b) Port Captain will then notify pilot of the vessel at Miraflores or Gatun Locks, as the case may be, to take up the cargo declaration before he leaves the vessel. Upon his return, the pilot will deliver the cargo declaration to the Port Captain's office which, in turn, will deliver same to the Chief Customs Inspector.

(c) In accordance with Rule 13, *clearance will not be issued until after "all documents and statistical data required by the Canal authorities in regard to vessel, cargo, and passengers have been furnished."*

C. H. WOODWARD,
Marine Superintendent.

APPROVED:

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, May 23, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
M. F. Elliott ¹ .	16	20 55	17	6 20	17	13 17	17	14 35	American	Standard Shipping Co.	425 0	57 2	19 0	Charleston, S. C.	San Francisco, Cal.	Ballast.	7,481	4,946	
Sydney M. Hauptman.	17	4 00	17	7 00	17	13 59	17	15 10	American	Munson, McCork' Line	401 0	53 2	23 0	New York, N. Y.	Tacoma, Wash.	(⁹) Steel products.	5,032	7,082	
Lancaster.	17	7 00	17	7 45	17	14 43	17	19 30	American	Argonaut S. S. Co.	434 0	57 7	27 0	Mobile, Ala.	San Francisco, Cal.	General.	9,274	7,935	
Manizales.	9	17 45	17	9 30	17	16 50	17	17 45	German	Roland S. S. Line	216 6	32 9	12 0	Cristobal, C. Z.	Guayaquil, Ecuador	General.	238	1,132	
C. O.																	741		
Sullivan ² .	17	12 30	17	12 40	17	20 30	18	1 38	British	Inter. Petroleum Co.	565 0	75 6	25 0	Halifax, N. S.	Talara, Peru	Ballast.	16,780	9,885	
Tuscaloosa																			
Fosna ² .	17	14 45	17	14 55	17	21 45	17	23 03	American	Isthmian S. S. Lines	424 2	56 2	22 0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	5,589	7,611	
Elizabeth	17	17 00	17	18 00	18	9 34	18	10 21	Norwegian.	Anglo-Saxon Pet. Co.	451 1	59 2	18 0	Falmouth, England	Los Angeles, Calif	Ballast.	8,318	5,667	
Kellogg ² .	17	18 50	17	19 10	18	10 39	18	11 34	American	Philippine S. S. Corp.	391 9	51 2	22 0	New York, N. Y.	Los Angeles, Calif	Ballast.	5,410	3,804	
LaPlata Maru ² .	17	14 50	18	6 05	18	14 22	18	19 34	Japanese	Osaka Shosen Kaisha	430 0	56 0	22 0	Buenos Aires, Arg.	Kobe, Japan	Cotton, wheat.	3,744	7,875	
Sunnarvik ² .	17	9 05	18	6 42	18	15 03	18	16 35	Swedish.	Isbrandtsen Moller	390 0	54 6	20 10	Baltimore, Md.	Saigon, China	General.	5,763	6,775	
Brinanger ² .	17	13 10	18	8 30	18	15 26	18	16 35	Norwegian.	Westfall, Larsen & Co.	398 0	54 9	19 5	Buenos Aires, Arg.	Vancouver, B. C.	Coffee, bones.	4,033	6,853	
Buenaventura.	17	10 55	18	10 05	18	18 16	18	20 55	American	Panama R. R. S. S. Line	251 0	43 0	16 0	New York, N. Y.	Guayaquil, Ecuador	General.	460	2,873	
Cauca ² .	10	50 18	10	10 35	18	18 00	18	22 45	Colombian.	National Navigation Co.	107 0	22 0	9 0	Cristobal, C. Z.	Buenaventura, Col.	General.	33	262	
Sacramento ² .	14	22 30	18	14 20	18	18 00	18	22 45	American	U. S. Navy	210 0	40 0	15 7	Nicaragua	Gatun, C. Z.	Ballast.	2,178	6,624	
Pacific Fir	19	5 15	19	7 15	19	14 10	19	15 55	American	Dimon S. S. Corp.	410 5	54 0	15 7	Philadelphia, Pa.	Seattle, Wash.	General.	3,801	11,721	
Damsterdijk ² .	19	1 35	19	12 00	19	18 23	19	19 55	Dutch.	Holland-America Line.	490 0	64 0	17 8	Rotterdam, Holland	Vancouver, B. C.	General, bananas	2,321	9,032	
Nebraska	19	17 45	19	20 20	20	11 29	20	12 20	American	Amer-Hawaiian Line	471 0	59 0	17 8	Boston, Mass.	Seattle, Wash.	General.	2,780	5,776	
Guatemala.	18	20 45	20	6 00	20	13 22	20	15 45	American	Panama Mail S. S. Co.	360 2	51 6	23 3	New York, N. Y.	San Francisco, Cal.	General.	1,950	3,529	
Arta.	19	16 35	20	6 10	20	13 41	20	15 45	German	North German Lloyd	331 0	46 0	18 10	Hamburg, Germany	San Antonio, Chile.	General.	3,920	7,947	
Susan V.	19	20 30	20	7 00	20	15 06	20	16 20	American	Luckenbach Line.	434 3	57 7	21 0	Boston, Mass.	Seattle, Wash.	General.	3,750	6,252	
Luckenbach.	19	20 30	20	8 10	20	16 02	20	17 15	Danish	Canadian Transp. Co.	380 0	54 0	22 0	Pt. of Spain, Trin.	Vancouver, B. C.	Sugar	2,646	7,678	
Nordpol ² .	19	21 00	20	13 00	20	19 25	20	21 00	French	French Line	448 8	53 2	17 6	Haar, France.	Corral, Chile.	Iron, general.	1,303	7,795	
Arkansas	20	10 00	20	13 07	20	22 38	20	23 30	Italian.	Nax. Libera Tristina	436 6	55 0	18 6	Trieste, Italy	Vancouver, B. C.	General.	46	21	
Feltre ² .	20	10 00	20	15 07	20	22 38	20	23 30	Panamanian	Rais Elliott	62 0	17 6		Cristobal, C. Z.	Balboa, C. Z.	Ballast.	1,778	17,146	
Rea ² .	19	14 30	20	6 05	20	10 37	20	11 40	British	A. M. Butcher	550 0	63 0	27 4	Cristobal, C. Z.	Gatun, C. Z.	Ballast.	1,778	17,146	
Jean ² .	20	15 00	21	6 05	21	13 11	21	14 10	British	Pacific Steam Nav. Co.	429 0	54 0	18 8	Liverpool, England	Valparaiso, Chile	General.	6,558	14,621	
Orduña.	20	15 30	21	6 05	21	14 40	21	15 35	British	T. & J. Harrison.	385 0	52 0	19 0	Manchester, Eng.	Vancouver, B. C.	General.	2,472	5,131	
Planter	21	6 35	21	7 20	21	15 29	21	17 05	British.	Amer-Australian Line.	421 2	54 3	16 0	Newcastle, Eng.	Fremantle, Aust. lth	General.	6,362	12,623	
Wirral.	21	7 05	21	8 30	21	16 29	21	17 45	British.	Sir. R. Roper & Co.	440 3	63 7	18 4	N. Shields, Eng.	Vancouver, B. C.	Ballast.	11,107	24,830	
Somersby.	21	7 30	21	9 30	21	16 54	21	17 50	Danish.	East Asiatic Co.	470 3	64 3	19 0	Copenhagen, Den.	Vancouver, B. C.	General.	2,197	6,573	
India ² .	21	5 45	21	11 14	21	17 50	21	19 23	American.	States S. S. Co.	410 5	53 3	19 0	New York, N. Y.	Tacoma, Wash.	General.	1,512	4,619	
San Simeon.	20	23 15	21	13 00	21	19 09	21	20 30	French.	French Line	472 0	59 3	22 3	Haar, France.	Vancouver, B. C.	Iron, general.	1,512	4,619	
Winnipeg ² .																	7,592		
¹ Tanker.																			
² Motor ship.																			
³ Launch.																			
⁴ Motor boat.																			
⁵ Gunboat.																			

¹ Tanker.² Motor ship.³ Gunboat.⁴ Motor boat.⁵ Launch.⁶ Steel, lubricating oil, and general.

President	21	16	25	22	6	05	22	12	54	22	21	30	Ameri- can.	Dollar Line	517	0	73	2	25	0	New York, N. Y.	Manila, P. I.	1,136	15,296	10,427
Jackson	21	15	40	22	6	15	22	13	17	22	14	45	Norwegi- an.	J. J. Moore & Co	387	6	60	12	6	0	Stockholm, Sweed	San Francisco, Calif	6,913	4,894	5,533
Danwood	21	17	35	22	7	05	22	14	51	22	16	25	Swedish	Johnson Line	426	0	56	0	19	11	Gothenburg, Sweden	San Francisco, Cal.	2,969	7,480	5,533
Balboa	21	15	40	22	6	15	22	13	17	22	14	45	Norwegi- an.	Johnson Line	426	0	56	0	19	11	Gothenburg, Sweden	San Francisco, Calif	6,913	4,894	5,533
Thoreau	21	22	50	22	7	05	22	14	51	22	16	25	Swedish	Fred Olsen & Co	425	5	55	2	20	8	Antwerp, Belgium	Los Angeles, Calif	5,126	7,933	5,637
Rosevelt	21	22	50	22	8	20	22	15	44	22	17	10	Norwegian.	Silver Line	455	0	62	6	21	0	New York, N. Y.	Sourabaya, Java.	4,811	9,576	6,616
Lincoln	21	22	50	22	8	20	22	15	44	22	17	10	Norwegian.	Richford Oil Co.	500	0	71	2	21	0	New York, N. Y.	Los Angeles, Calif	11,667	8,542	8,542
Washington	22	00	10	22	8	25	22	16	36	22	18	05	American	Bank Line	426	8	57	3	15	9	Baltimore, Md	Shanghai, China	1,822	7,172	5,346
Franklin	22	16	30	22	10	35	22	18	22	23	7	30	British	Chilean Nitrate Prod.	405	0	57	3	15	9	S. Shields, England	Antofagasta, Chile	6,172	5,346	7,402
Monroe	22	20	25	22	16	35	22	3	45	23	11	30	British	New York Nitrate Prod.	204	0	38	4	18	0	New York, N. Y.	Bremont, Wash.	1,633	1,041	1,041
Durham	21	12	00	23	6	10	23	13	31	26	10	05	American	New York State	227	5	34	4	13	8	New York, N. Y.	Guayquil, Ecuador	150	7,521	5,852
Donnerstag	16	17	30	23	6	08	23	13	25	23	21	50	German	Hamburg-American Line	420	5	54	7	18	3	Cristobal, C. Z	Vancouver, B. C.	6,515	4,756	4,756
Donnerstag	23	00	10	23	6	15	23	13	26	24	18	26	British	Blue Star Line	384	7	54	3	15	3	Newcastle, England	Los Angeles, Calif	4,000	8,805	6,035
Donnerstag	23	4	35	23	7	25	23	15	26	23	16	35	Danish	Canadian Transport Co.	464	6	60	0	21	4	New York, N. Y.	Dairen, China	15,560	4,496	4,496
Thurhead	23	6	35	23	7	30	23	16	31	23	22	20	British	Barber S. S. Line	501	0	72	0	22	0	New York, N. Y.	Cruz Grande, Chile	6,617	4,792	4,792
Castle	23	9	45	23	9	55	23	16	34	23	22	05	Swedish	Ore S. Corp.	460	5	52	0	15	0	New York, N. Y.	Iquique, Chile	5,761	4,322	4,322
Amerikaland	23	6	35	23	11	00	23	18	41	24	00	15	Belgian.	Int. de Comm.et d'Arm.	377	0	52	2	13	0	Barry, England	Los Angeles, Calif	655	2,352	1,549
Am.	23	12	10	23	12	15	23	18	58	23	20	14	Norwegian.	J. L. Mowinkel Red'ri	261	0	53	0	14	0	Gothenburg, Sweed.	San Francisco, Calif	3,227	5,416	5,416
Henri	23	16	35	23	12	25	23	18	58	23	24	00	American	Panama Mail S. S. Co.	379	0	53	2	22	3	Cristobal, C. Z	San Francisco, Cal	5,450	11,443	8,469
Conito.	10	16	35	23	14	45	23	22	54	24	00	15	American	Grace Line	379	0	53	2	22	3	New York, N. Y.	Valparaiso, Chile	5,450	11,443	8,469
Santa Inez	22	17	10	23	15	00	23	21	24	24	1	25	British	N. Z. Shipping Co.	480	0	60	0	29	0	London, England	Auckland, N. Z.	2,676	2,676	2,676
Ruahine	23	15	52	23	16	00	23	22	30	24	17	41	British	Furness, Withy & Co.	441	0	60	0	29	0	New York, N. Y.	Manila, P. I.	2,676	2,676	2,676
Gingalee	23	19	35	23	19	50	24	9	01	24	10	49	British	Furness, Withy & Co.	441	0	60	0	29	0	New York, N. Y.	Manila, P. I.	2,676	2,676	2,676
Prinze	23	19	35	23	19	50	24	9	01	24	10	49	British	Furness, Withy & Co.	441	0	60	0	29	0	New York, N. Y.	Manila, P. I.	2,676	2,676	2,676

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

17	Sadma City Producers'	17	6.16	17	13.25	17	13.25	American		Isthmian S. S. Lines, Anglo-Saxon Pet. Co.	424.2	56.2	27.0	Port Allen, T. H. Los Angeles, Calif.	East coast, U. S. A. Land's End, Eng st .	Sugar, Gasoline.....	8,416 10,725	5,450 8,323	5,768
16	Mckinley	17	6.55	17	14.25	17	17.05	Norwegian.		Dollar Line.....	516.5	72.2	37.0	Manila, P. I.	New York, N. Y.	General	3,922	15,286	10,498
18	Children	18	6.18	18	15.30	18	15.30	American		S. S. Corp.....	549.6	72.7	34.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,250	14,538	4,480
17	Missourian *	17	6.48	18	14.45	18	14.45	American		North-Hawain Line	445.1	59.8	24.0	San Francisco, Cal.	Boston, Mass.	General	6,656	6,567	6,020
18	Assur	18	6.25	18	16.24	18	20.20	German		Amer-German Lloyd	333.1	54.3	27.0	Valparaiso, Chile	Bremen, Germany	General	8,000	6,542	4,532
18	Calagrite	18	6.08	18	16.30	18	18.30	British		Imperial Oil Co.	521.5	74.0	31.5	Talara, Peru	Montreal, Canada	Crude oil	16,400	12,339	7,512
18	Resolute,	18	6.15	18	18.50	18	19.40	German		Hamburg-American Line	590.4	72.2	27.4	New York, N. Y.*	New York, N. Y.	Passengers	20,899	20,899	12,777
18	El Cervo	18	6.41	19	19.11	19	21.30	Panama		Hans Ekeard. Oil Co.	407.4	52.2	26.4	La Libertad, Perud.	Philadelphia, Pa.	Crude oil	7,941	6,046	4,326
19	Real	19	6.10	19	14.39	19	8.00	British		Hans Eliott.....	62.0	18.0		Balboa, C. Z.	Bananas		28	46	22
19	Caldas	19	6.05	19	15.15	19	15.15	Colombian.		United Fruit Co.,	116.0	21.1	9.0	Buenaventura, Col.	Cristobal, C. Z.	Coffee	133	211	124
19	Treacrell	19	6.00	19	14.10	19	15.30	British		Hain S. S. Co.,	400.0	52.3	25.0	Vancouver, B. C.	Oran *	Wheat	2,720	5,700	4,067
18	Joba Maru	18	6.30	19	13.44	19	20.35	Japanese.		Nippon Yusen Kaisha.	445.0	51.0	24.1	Iloilo, P. I.	New York, N. Y.	General	6,764	8,058	5,435
18	Janeta	18	6.35	19	14.32	19	22.25	British		MacLay & McIntyre	402.4	55.0	25.3	Vancouver, B. C.	Antwerp, Belgium	General	8,329	6,134	4,743
10	Walser A.	10	7.00	20	14.05	20	14.05	American		Luckenbach Line	446.5	55.1	29.4	Portland, Oreg.	Boston, Mass.	Lumber, general.	7,193	8,785	6,567
19	Pacific	19	7.22	20	14.45	20	14.45	British		Furness, Withy & Co.	435.9	60.7	28.4	Vancouver, B. C.	Glasgow, Scotland	General	8,989	9,633	6,998
19	Kurekita Maru	19	7.50	20	16.10	20	19.05	Japanese		Tatsumasa Kisen Kaisha	404.9	53.0	23.0	Naseeben	U. S. Atlantic port.	Sugar	6,800	7,330	5,241
20	Mokabe City	20	14.35	20	20.50	20	22.50	American		Isthmian S. S. Lines	395.5	55.0	27.0	Port Alice, B. C.	Providence, R. I.	Lumber, pulp	7,930	7,600	5,241
21	Nosa King.	21	6.59	21	14.50	21	22.40	American		N. O. & S. A. S. S. Co.	324.0	46.2	22.0	Valparaiso, Chile.	New Orleans, La.	Nitrates, coffee.	4,062	3,978	2,560

* Motor ship. * Around the world. ** For orders.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PANAMA TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Salt		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	draft.			Nature.	Tons.	Gross.	Net.
Nelson	20	19 55	21	7 13	21	16 05	21	16 05	American	Charles Nelson Co.	380 3	53 1	24 2	Seattle, Wash.	New York, N. Y.	Lumber, general.	6,295	5,657	4,133
Traveler	21	6 30	21	7 58	21	15 10	21	21 05	American	Panama R. R. S. S. Line	251 0	43 6	17 4	Guayaquil, Ecuador	New York, N. Y.	General	1,275	2,874	1,944
Guayaquil	21	00 35	21	8 29	21	16 30	21	16 30	American	J. B. Berry Sons Co.	365 0	51 0	25 4	Los Angeles, Calif.	Tiverton, R. I.	Gasoline	6,473	5,174	3,528
J. W. Van	21	9 00	21	10 58	21	18 35	21	22 10	British	Canadian Wheat Corp.	390 0	55 5	24 0	Prince Rupert, B. C.	Havre, France	Wheat	4,920	5,899	4,231
Troutwood	21	6 02	21	11 49	21	19 20	21	19 20	British	Canard Line	601 3	73 7	28 0	New York, N. Y.	New York, N. Y.	Passengers	22,513	16,521	
France	21	11 30	21	12 29	21	19 55	21	5 55	Dutch	Royal Neth. S. S. Co.	202 9	33 1	14 0	Buenaventura, Col.	Cristobal, C. Z.	General	680	1,182	742
Barat	21	12 00	21	13 21	21	21 25	21	23 25	Japanese	Kokusa Kisen Kaisha.	425 0	53 8	26 5	Manila, P. I.	New York, N. Y.	Sugar, hemp	8,750	6,899	5,139
Tamaho Maru	21	12 00	21	13 21	21	21 25	21	23 25	American	Tampa Interocean Co.	439 6	60 0	24 0	Manila, P. I.	New Orleans, La.	General	10,323	8,987	6,612
Patrick Henry	20	21 55	21	14 10	21	21 28	21	22 45	British	R. Chapman & Son	412 6	59 1	28 0	Vancouver, B. C.	London, England	Wheat, general	9,944	8,811	4,810
Koranton	21	15 40	21	16 21	21	22 12	21	22 45	British	Hamburg-American Line	432 3	59 1	26 0	Vancouver, B. C.	Hamburg, Germany	General	7,541	8,454	6,344
San Francisco	21	16 10	21	17 15	21	22 13	21	22 15	American	Wayne & Hoyt	386 8	52 2	18 0	Portland, Ore.	Mobile, Ala.	Sugar, general	2,651	5,708	4,138
Point Palmas	21	18 50	22	6 12	22	13 15	22	13 15	British	Common Brothers	440 0	57 5	26 0	Vancouver, B. C.	Antwerp, Belgium	Wheat, fish	9,959	7,679	5,848
Goolistan	21	19 25	22	7 09	22	15 00	22	15 55	British	Pacific Steam Nav. Co.	215 7	33 6	17 0	Champerico, Guat.	Cristobal, C. Z.	General	1,098	1,273	706
Acajutla	22	00 15	22	7 12	22	15 00	22	15 30	American	Amer-Hawaiian Line	472 3	57 2	27 0	Tacoma, Wash.	Boston, Mass.	General	9,302	9,258	6,944
Mexican	22	4 15	22	7 41	22	15 30	22	16 55	Danish	Inter-Freighting Corp.	380 0	53 5	25 2	Tacoma, Wash.	Jacksonville, Fla.	Nitrates, wax	7,960	6,190	4,569
Nordbo	22	5 00	22	8 30	22	16 55	22	16 55	Danish	Inter-Freighting Corp.	380 0	53 5	25 2	Tacoma, Wash.	Jacksonville, Fla.	Nitrates, wax	7,960	6,190	4,569
Spreewald	22	6 00	22	8 43	22	16 40	23	1 15	German	Hamburg-American Line	399 4	54 2	26 0	Valparaiso, Chile	Hamburg, Germany	Nitrates, cotton	7,574	6,791	4,997
Elg	22	12 30	22	13 16	22	20 10	22	20 10	Norwegian	Isbrandtsen, Moller Co.	357 4	51 2	24 0	Hingaran, P. I.	Providence, R. I.	General	6,263	5,176	3,761
Raina del	22	8 40	22	14 31	22	22 40	23	00 35	British	Pacific Steam Nav. Co.	550 1	76 3	30 0	Talcahuano, Chile	Liverpool, England	General	5,817	18,871	13,099
Pacific	22	16 30	22	17 15	23	11 05	23	11 05	Norwegian	Fearnley & Eger	381 4	43 8	25 2	Iloilo, P. I.	E. coast, U. S. A.	Sugar	7,450	6,290	4,530
Fernunor	22	16 30	22	17 15	23	11 05	23	11 05	Norwegian	Fearnley & Eger	381 4	43 8	25 2	Iloilo, P. I.	E. coast, U. S. A.	Sugar	7,450	6,290	4,530
San Bernardino	22	19 55	23	6 00	23	13 45	23	16 20	American	States S. S. Co.	410 5	54 2	25 3	New Westminster, B. C.	Philadelphia, Pa.	Lumber, general	7,098	6,755	4,873
Texas	22	23 00	23	6 49	23	15 40	23	15 40	American	Calmar Line	410 0	54 3	25 0	Portland, Ore.	New York, N. Y.	Lumber	7,589	6,567	4,909
Lena Luckenbach	23	1 00	23	7 13	23	14 45	23	14 45	American	Luckenbach Line	425 0	53 8	21 0	Portland, Ore.	Mobile, Ala.	General	4,113	7,217	5,295
Fernlaue	23	7 30	23	8 05	23	16 00	23	16 00	Norwegian	Fearnley & Eger	376 0	53 8	26 0	Vladiv, U. S. S. R.	Denmark	Soya beans	7,300	6,264	4,981
Cal	23	11 55	23	12 45	23	19 55			German	Roland Line	216 5	32 0	13 3	Guayaquil, Ecuador	Cristobal, C. Z.	General	755	1,105	698
Robert E.	23	13 15	23	13 56	23	21 10	23	00 01	American	Tidewater Oil Co.	424 4	58 2	26 0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,189	7,333	5,182
Hopkins	23	13 15	23	13 56	23	21 10	23	00 01	American	Tidewater Oil Co.	424 4	58 2	26 0	San Francisco, Cal.	New York, N. Y.	Gasoline	9,189	7,333	5,182

* Tanker.

11 Motor ship.

12 Around the world.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 17	Iriona	United Fruit Co.	Port Limon, Costa Rica.	May 17	Darien	Leyland S. S. Line	Santa Cruz del Sur.
May 17	Estuero ¹³	J. Asmusen	Cape Gracias a Dios.	May 17	No. 144-M ¹⁴	Pan American-Grace Airways	Pimental via waypts.
May 18	Darien C-35 ¹⁴	Seadla Airplane Co.	Barranquilla via waypts.	May 17	No. 688-M ¹⁴	Pan American Airways	Miami via waypts.
May 18	Colombia	Royal Netherlands S. S. Co.	Amsterdam via waypts.	May 17	No. 9885 ¹⁴	Pan American Airways	San Salvador and waypts.
May 19	Coacapa	United Fruit Co.	Cartagena, Colombia.	May 17	Iriona	United Fruit Co.	New Orleans, La.
May 19	No. 144-M ¹⁴	Pan American-Grace Airways	Pimental via waypts.	May 17	Magdalena	Hamburg-American Line	Hamburg via waypts.
May 19	Inapaquina ¹⁵	A. Tagaropoulos	Colon, Rep. of Panama.	May 18	Acacia ¹⁷	U. S. Government	San Juan, Puerto Rico.
May 19	Anachucma ¹⁵	A. Tagaropoulos	Colon, Rep. of Panama.	May 18	Colombia	Royal Netherlands S. S. Co.	Colon, Rep. of Panama.
May 20	Pastores	Panama R. R. S. S. Line	New York via Haiti.	May 19	Inapaquina ¹⁶	A. Tagaropoulos	Colon, Rep. of Panama.
May 20	Tela	United Fruit Co.	New Orleans, La.	May 20	Zacapa	United Fruit Co.	New York via Kingston.
May 20	Guardian ¹⁵	All America Cable Co.	Guantanamo, Cuba.	May 20	No. 9664 ¹⁴	Pan American Airways	San Salvador and waypts.
May 20	No. 690-M ¹⁴	Pan American Airways	Miami via waypts.	May 20	No. 670-M ¹⁴	Pan American Airways	Miami via waypts.
May 21	Colombia	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	May 21	Tela	United Fruit Co.	Port Limon via Bocas.
May 21	No. 9688 ¹⁴	Pan American Airways	San Salvador and waypts.	May 21	Juan Sebastian Elcano	Spanish S. S. Line	Barcelona via waypts.
May 21	Baracoa	Colombian S. S. Line	New York via waypts.	May 21	Estuero ¹³	Pan American-Grace Airways	Pimental via waypts.
May 22	Stella Lykes	Lykes Brothers S. S. Co.	Lake Charles and waypts.	May 21	A. G. Leonet ¹³	J. Asmusen	Bluefields, Nicaragua.
May 22	Ulua	United Fruit Co.	New Orleans and Habana.	May 21	Pastores	W. W. Miller & L. Berry	Cartagena, Colombia.
May 22	Contessa	Standard Fruit & S. S. Co.	New Orleans via waypts.	May 21	Guardian ¹⁵	United Fruit Co.	Colombian ports.
May 22	Iriona	A. Tagaropoulos	Avonmouth via waypts.	May 22	Darien C-35 ¹⁴	All America Cables	Barranquilla via waypts.
May 22	Anaetia L. ¹⁶	P. W. Hamilton	Colon, Rep. of Panama.	May 22	Baracoa	Colombian S. S. Line	New York via Kingston.
May 23	No. 668-M ¹⁴	Pan American Airways	Bocas, Rep. of Panama.	May 22	Arizani	Elders & Fyffes Line	Avonmouth via waypts.
May 23	No. 9670 ¹⁴	Pan American Airways	Miami via waypts.	May 22	Ulua	United Fruit Co.	New York via waypts.
May 23	No. 300-N ¹⁴	Pan American-Grace Airways	San Salvador and waypts.	May 22	Inapaquina ¹⁶	A. Tagaropoulos	Colon, Rep. of Panama.
May 23	Carmelia ¹¹	Standard Fruit & S. S. Co.	Pimental via waypts.	May 23	Anaetia L. ¹⁶	P. W. Hamilton	Colon, Rep. of Panama.
May 23	Nueva Espana ¹⁶	Diez & Garcia	Colon, Rep. of Panama.	May 23	Carmelia ¹³	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
May 23				May 23	Contessa	Lykes Brothers S. S. Co.	Colon, Rep. of Panama.
May 23				May 23	Stella Lykes	Lykes Brothers S. S. Co.	New Orleans and waypts.
May 23				May 23	Tela	United Fruit Co.	San Domingo via waypts.
May 23				May 23			New Orleans, La.
¹³ Motor schooner. ¹⁴ Air mail carrier. ¹⁵ Cable ship.				¹⁷ Lighthouse tender.			
PORT OF BALBOA.							
May 18	Heiyo Maru ¹⁸	Nippon Yusen Kaisha	Valparaiso, Chile.	May 18	Heiyo Maru ¹⁶	Nippon Yusen Kaisha	Hongkong, China.
May 20	La Pera	United Fruit Co.	San Francisco, Calif.	May 21	La Pera	United Fruit Co.	San Francisco, Calif.
May 21	Sveadrott ¹⁶	Knutson Line	Vancouver, B. C.				
¹⁸ Motor ship.				* Other than ships passing through the Canal.			

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., May 25, 1931.

No. 888.

Caribbean Sea, buoy adrift. The S.S. *Binbang* reports the following by radio:

May 24, 1931, at 1 p. m., passed large whistle or light buoy adrift. Lat. 15° 23' N., long. 81° 23' W.. Dangerous to navigation.

Gulf of Panama, spar buoy adrift. The S.S. *Syra* reports the following by radio:

May 24, at 1 p. m., passed drifting red spar buoy. Approximate position, long. 8° 4' N., lat. 79° 46' W..

The S. S. *Pennsylvania* also sighted this buoy at 7.52 a. m., May 25, about 32 miles south of Bona Island.

H. BURGESS,
Governor..

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 23, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Bodegraven	Royal Netherlands S. S. Co.		May 17.		345
Magdalena	Hamburg-American Line		May 17.		1,074
President McKinley	Dollar Line	May 17.	May 17.	372	
Iriona	United Fruit Co.	May 17.	May 17.	197	238
Brimanger	Wesfal, Larsen & Co.	May 17.	May 18.	(¹)	45
Washington	French Line	May 17.	May 18.	214	560
Sunnanvik	Isbrandtsen Moller.	May 17.	May 18.	102	(²)
Buenaventura	Panama R. R. S. S. Line	May 17.	May 18.	1,053	48
Esfuerso	J. Asmussen	May 17.	May 20.	60	(²)
Cauca	National Navigation Co.		May 18.		283½
Ansgir	North German Lloyd.	May 18.	May 18.	40	(²)
Colombia	Royal Netherlands S. S. Co.	May 18.	May 18.	59	22
Guatemala	Panama Mail S. S. Co.	May 18.	May 20.	175	1,184
Damsterdijk	Holland-America Line.	May 19.	May 19.	214	166
Zacapa	United Fruit Co.	May 19.	May 20.	27	686
Arkansas	French Line	May 19.	May 20.	102	245
Arta	North German Lloyd.	May 19.	May 20.	46	44
Caldas	National Navigation Co.	May 19.		147	
Feltre	Navigazione Libera Triestina	May 20.	May 20.	63	(²)
Winnipeg	French Line	May 20.	May 21.	127	125
Pastores	United Fruit Co.	May 20.	May 21.	318	225
Tela	United Fruit Co.	May 20.	May 21.	707	43
Orduna	Pacific Steam Navigation Co.	May 20.	May 21.	50	115
Planter	Leyland S. S. Line	May 20.	May 21.	286	(²)
Ancon	Panama R. R. S. S. Line	May 20.		3,506	
Juan Sebastian Elcano	Spanish S. S. Line		May 21.		313
San Simon	States S. S. Co.	May 21.	May 21.	104	(²)
Balboa	Johnson S. S. Line	May 21.	May 22.	145	(²)
Nosa King	N. O. & S. A. S. S. Co.	May 21.	May 21.	(¹)	163
Baralt	Royal Netherlands S. S. Co.	May 21.		680	
Colombia	Royal Netherlands S. S. Co.	May 21.		25	(²)
Guayaquil	Panama R. R. S. S. Line	May 21.	May 21.	226	226
Patrick Henry	Tampa Intercean S. S. Co.	May 21.	May 22.	137	(²)
Baracoa	Colombian S. S. Line	May 21.	May 22.	47	7
Ulua	United Fruit Co.	May 22.	May 22.	196	116
San Francisco	Hamburg-American Line	May 22.	May 22.	22	68
Ariguani	Elders & Fyffes, Ltd.	May 22.	May 22.	½	(²)
Santa Inez	Grace Line	May 22.	May 23.	318	843
Stella Lykes	Lykes Brothers.	May 22.	May 23.	1,169	26
Spreewald	Hamburg-American Line	May 22.	May 23.	102	(²)
Contessa	Standard Fruit & S. S. Co.	May 22.	May 23.	389	216
Acajutla	Pacific Steam Navigation Co.	May 22.		1,098	
Reina del Pacifico	Pacific Steam Navigation Co.	May 22.	May 23.	(²)	(²)
Eisenach	North German Lloyd	May 23.		101	
Tela	United Fruit Co.	May 23.	May 23.	42	308
Calif.	Roland Line	May 23.		755	
Corinto	Panama Mail S. S. Co.		May 23.		663
Durazzo	Hamburg-American Line		May 23.		120

¹ No cargo discharged.

² No cargo laded.

³ Three cases.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

New Water Tanks Under Construction at Mount Hope.

Work has started on the construction of two steel water tanks of 1,000,000 gallons capacity each at Mount Hope for the Municipal Engineering Division as additional provision for the water requirements in the Cristobal-Colon district. The new tanks are made necessary by the increased population of the Cristobal-Colon district, particularly in the Army and Navy posts, and the need of a larger water reserve which can be called upon in the event of an emergency, such as a break in the line from Brazos Brook reservoir, a shut-down of the pumping station, electric power failure, etc.

The steel for the first of the new tanks was received on the Isthmus the early part of this month and is being erected by the Mechanical Division. The tank will be completed in July. Upon its completion the existing 500,000-gallon tank, which is in poor condition, will be destroyed, and the second 1,000,000-gallon tank will be erected on the site of the old tank.

The development will give a reserve and pressure storage of 2,000,000 gallons as compared with the existing reserve of 500,000 gallons. The tanks are to be elevated, their bottoms about 154 feet above sea level, their tops approximately 35 feet higher.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hindquarters selling at 14½ cents per pound, and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery, or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships' bunkers. Oil can be delivered as fast as the ships can take it, from 46 tanks aggregating approximately 2,361,040 barrels of storage capacity. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Sailings of Panama Railroad Steamship Line.

Following are proposed dates of sailings for 1931 of passenger vessels in the New York-Cristobal service of the Panama Railroad Steamship Line, in which the steamers *Ancon* and *Cristobal* are engaged, sailing alternately:

Steamer.	From New York to Cristobal			From Cristobal to New York.		
	Leave New York 4 P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive Cristobal A. M.	Leave Cristobal P. M.	Arrive Port au Prince A. M. Leave P. M.	Arrive New York A. M.
Cristobal.....	May 26.....	May 31.....	June 3.....	June 7.....	June 10.....	June 15.....
Ancon.....	June 9.....	June 14.....	June 17.....	June 21.....	June 24.....	June 29.....
Cristobal.....	June 23.....	June 28.....	July 1.....	July 5.....	July 8.....	July 13.....
Ancon.....	July 8.....	July 13.....	July 16.....	July 19.....	July 22.....	July 27.....
Cristobal.....	July 21.....	July 26.....	July 29.....	August 2.....	August 5.....	August 10.....
Ancon.....	August 4.....	August 9.....	August 12.....	August 16.....	August 19.....	August 24.....
Cristobal.....	August 18.....	August 23.....	August 26.....	August 31.....	September 3.....	September 8.....
Ancon.....	September 1.....	September 6.....	September 9.....	September 13.....	September 16.....	September 21.....
Cristobal.....	September 15.....	September 20.....	September 23.....	September 27.....	September 30.....	October 5.....
Ancon.....	September 29.....	October 4.....	October 7.....	October 11.....	October 14.....	October 19.....
Cristobal.....	October 14.....	October 19.....	October 22.....	October 25.....	October 28.....	November 2.....
Ancon.....	October 27.....	November 1.....	November 4.....	November 8.....	November 11.....	November 16.....
Cristobal.....	November 10.....	November 15.....	November 18.....	November 22.....	November 25.....	November 30.....
Ancon.....	November 24.....	November 29.....	December 2.....	December 6.....	December 9.....	December 14.....
Cristobal.....	December 8.....	December 13.....	December 16.....	December 20.....	December 23.....	December 28.....
Ancon.....	December 22.....	December 27.....	December 30.....	January 3.....	January 6.....	January 11.....

* Effective April 28th, steamers sail daylight saving time.

† Due to discontinuance of the daylight saving time, departure of S. S. *Ancon*, September 29, will be at 4 p. m. standard time.

Steamers sail at 4 p. m. from Pier 65, North River, foot of West 25th St., New York.

On both southward and northward voyages the vessels call at Port-au-Prince, Haiti, which is approximately 5 days from New York and 60 hours from Cristobal. The stay of vessels at Port-au-Prince is of sufficient length of time to allow passengers to visit points of interest.

Tolls Charges for Transit of the Panama Canal.

1. Merchant vessels carrying passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... \$1.20
2. Vessels in ballast, without passengers or cargo, per net vessel ton (each 100 cubic feet) of actual earning capacity as determined by the Panama Canal Rules of Measurement..... .72
3. Naval vessels, other than transports, colliers, hospital ships, and supply ships, per displacement ton..... .50
4. Army and navy transports, colliers, hospital ships, and supply ships, the vessel to be measured by the same rules as are employed in determining the net tonnage of merchant vessels, per net ton..... 1.20
5. Tolls may not exceed the equivalent of \$1.25 per net registered ton as determined by United States rules of measurement, nor be less than the equivalent of \$0.75 per net registered ton so determined.
6. Vessels returning from Gatun Lake or original point of entry into the Canal, without passing through the locks at the other end, are charged tolls for one passage only.
7. Vessels transiting the Panama Canal from Cristobal to Balboa and return for the sole purpose of having repairs made at the Balboa dry dock and shops will be exempt from payment of tolls, but a charge will be made for pilotage and for handling lines as provided for in the current tariff or supplements thereto.

Information from American Consuls.

The Consular officers of the United States at seaports all over the world are *ex officio* representatives of The Panama Canal for the purpose of furnishing information to shipping and allied interests as to conditions, charges, etc., at the Panama Canal affecting the operation of ships. The current publications of The Panama Canal of interest to shipping are furnished to the Consular officers and filed for reference.

It is not desired that inquiries of a general nature be addressed to the Consular officers, or that they be burdened with requests which should be made direct to The Panama Canal; but ships' operators who may not be sufficiently advised as to charges, supplies, facilities, etc., at the Canal will often save time by applying to the nearest American Consul.

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.
PUBLISHED WEEKLY.



Subscription rates, domestic, \$0.50 per year; foreign, \$1.00; address
The Panama Canal Record, Balboa Heights, Canal Zone, or
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Entered as second-class matter February 6, 1918, at the Post Office
at Cristobal, C. Z., under the Act of March 3, 1879.



Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., June 3, 1931.

No. 44.

Canal Traffic During May.

During the month of May, 1931, 428 commercial vessels and 10 small nonseagoing launches under 20 tons measurement transited the Canal. Tolls on the commercial vessels aggregated \$1,923,452.18, and on the launches \$44.70, or a total tolls collection of \$1,923,496.88.

The daily average of commercial vessels was 13.81, and the daily average tolls collection was \$62,046.84, as compared with an average of 15.10 transits and \$67,144.97 in tolls for the previous month, and an average of 15.45 transits and \$69,770.92 in tolls for May, 1930. The average amount of tolls paid by each of the commercial transits was \$4,494.05, as compared with \$4,515.45 for the month of May, 1930.

With respect to the number of transits of commercial vessels traffic for the past month was the lowest since November, 1926, during which month the same number of vessels, 428, were transited. The daily average number of commercial transits in May, 1931 (13.81) was the lowest since October, 1925, in which month the daily average was 13.23 transits.

In the following tabulation the number of commercial transits and the amount of tolls collected are shown for the first 11 months of the current fiscal year, with the daily averages of transits and tolls, and the totals for the first 11 months of the fiscal years 1930 and 1929:

Month.	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	439	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
May.....	428	1,923,452.18	13.81	62,046.84
Total, first 11 months of fiscal year 1931.....	5,129	22,824,047.84	15.31	68,131.49
Total, first 11 months of fiscal year 1930.....	5,707	24,975,895.48	17.04	74,554.91
Total, first 11 months of fiscal year 1929.....	5,910	24,999,570.94	17.64	74,625.58

In comparison with the first 11 months of the fiscal year 1930, the traffic in the corresponding period this year has had 578 fewer transits and \$2,151,847.64 less tolls, decreases of 10.1 per cent and 8.6 per cent, respectively.

Postal Address of The Panama Canal.

The postal address is, "The Panama Canal, Balboa Heights, Canal Zone," or "The Panama Canal, Washington, D. C."

Mail for ships passing through the Canal or touching at either of the terminal ports should be addressed to "Cristobal, Canal Zone."

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, May 30, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.	Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.		
	Day.	Hour.		Day.	Hour.								Day.	Hour.	Nature.	Tons.	Gross.	Net.
Baralt.....	21	19.55	24	5.55	24	14.07	24	15.15	Dutch.....	202.0	33.1	13.0	Cristobal, C. Z.	General.	209	1,183	742
Point Gorda.....	24	4.45	24	6.10	24	14.12	24	15.15	American.....	324.0	46.2	21.0	Lake Charles, La.	General, rice.	3,245	3,984	2,643
Panama.....	23	21.20	24	6.13	24	13.17	24	14.26	Amer-Hawaiian Line.	407.7	53.7	21.0	Boston, Mass.	General.	3,336	7,098	5,065
Fordale.....	23	22.00	24	7.05	24	14.43	24	15.36	British.....	500.0	63.2	23.10	London, England.	Ballast.	11,781	7,392	
Steel Exporter.....	24	8.05	24	8.40	24	15.58	24	23.32	American.....	424.2	56.2	25.6	Mobile, Ala.	Tin, steel, etc.	7,786	7,611	5,450
Oakman.....	24	9.20	24	9.45	24	16.50	24	17.40	American.....	384.4	51.2	20.3	Baltimore, Md.	Steel, general.	3,896	6,327	4,433
Eisenach.....	23	19.20	24	11.05	24	17.54	25	16.30	German.....	360.0	50.0	18.1	Hamburg, Germany	General.	2,295	4,814	3,370
Pacific Trader ²	24	12.10	24	14.15	24	21.07	26	7.11	British.....	420.0	58.0	19.6	Glasgow, Scotland	General spirits.	1,102	7,979	5,916
Carlier.....	24	18.55	24	19.45	25	9.43	25	10.53	Belgian.....	471.1	60.8	19.0	Antwerp, Belgium.	Vancouver, B. C.	2,443	9,264	7,044
Virgilio ³	24	7.50	25	6.10	25	13.06	25	14.05	Italian.....	482.0	62.0	26.5	Genoa, Italy.	General.	1,713	12,941	9,329
Birmingham City.....	25	00.50	25	6.15	25	13.40	25	15.15	American.....	395.5	55.0	23.9	Baltimore, Md.	General.	4,635	7,304	5,188
Coptic ²	25	6.35	25	7.30	25	14.12	25	22.35	British.....	482.0	64.3	21.11	Liverpool, England	General.	3,825	11,819	8,366
Robinson Adair.....	25	7.05	25	7.30	25	15.47	25	16.55	American.....	424.8	55.0	24.2	Baltimore, Md.	Steel, general.	6,238	7,470	5,529
Arminia ³	25	3.45	25	7.35	25	15.30	26	16.10	American.....	100.0	21.0	9.0	Philadelphia, Pa.	Ballast.	174	62	
S-17 ⁴	25	9.25	25	9.25	25	13.54	26	16.10	American.....	231.0	21.0		Cristobal, C. Z.	Ballast.	2,435	10,092	6,743
Betterton.....	25	11.15	25	11.25	25	18.49	25	20.15	American.....	491.0	59.2	22.0	New York, N. Y.	General.	7,863	5,104	
Solvalben.....	25	9.35	25	13.55	25	20.15	25	21.18	German.....	491.0	63.8	21.0	Hamburg, Germany	General.	2,435	10,092	6,743
Caldas ²	19	15.15	25	14.40	25	21.39	26	00.25	Panamanian.....	116.0	21.1	7.6	Cristobal, C. Z.	General.	140	211	124
Wally ⁵	25	11.15	25	13.25	25	18.40	25	20.15	American.....	431.0	59.2	22.0	Gatun, C. Z.	Ballast.	1,197	5,748	5,855
Queen Maud.....	26	4.40	26	6.10	26	13.48	26	15.00	British.....	400.2	52.3	17.0	Baltimore, Md.	General.	3,748	6,736	4,844
Pennsylvania.....	25	8.40	26	7.25	26	14.40	27	20.00	American.....	417.0	56.0	17.4	Pt. Arthur, Tex.	Petroleum prod.	2,140	3,051	2,066
Binang ²	26	6.05	26	9.10	26	15.42	26	16.45	Danish.....	284.8	44.2	17.0	Houston, Tex.	Cotton.	2,544	7,983	5,916
Arizona.....	26	13.00	26	13.20	26	20.04	26	21.15	American.....	434.3	57.7	17.0	Boston, Mass.	General.	2,544	7,983	5,916
New Westminster City.....	26	14.35	26	14.45	26	21.38	26	22.50	British.....	400.5	54.3	24.3	Casa Blanca, Mor.	Phosphate.	7,787	7,000	5,407
Boskoop.....	26	1.55	27	6.00	27	15.40	28	3.35	Dutch.....	408.8	58.3	19.2	Hamburg, Germany	General.	1,984	7,817	6,097
Hokuriku Maru ²	26	21.50	27	6.20	27	16.01	27	17.00	Japanese.....	446.0	60.6	24.0	New York, N. Y.	General, tobacco.	4,308	8,942	6,251
Real ⁶	27	6.20	27	6.20	27	16.18	27	17.00	Panamanian.....	62.0	17.6		Cristobal, C. Z.	Ballast.	2,918	5,659	4,138
Charles Nelson.....	27	00.05	27	7.15	27	16.39	27	18.00	American.....	380.4	53.1	17.5	Seattle, Wash.	General.	6,462	8,188	5,676
Atago Maru ²	27	00.35	27	7.30	27	17.06	27	18.35	Japanese.....	440.0	57.0	25.6	Kobe, Japan.	General, cotton.	2,544	7,983	5,916
S-10 ⁴	27	8.25	27	8.25	27	17.34	28	18.35	American.....	231.0	21.0		Cristobal, C. Z.	Ballast.	2,544	7,983	5,916
S-15 ⁴	27	8.25	27	8.25	27	17.34	28	18.35	American.....	231.0	21.0		Cristobal, C. Z.	Ballast.	2,544	7,983	5,916
Katrina.....	27	4.15	27	9.40	27	18.04	27	19.25	American.....	446.0	56.0	22.9	Boston, Mass.	General.	3,910	8,508	6,179
Luckenbach.....	27	4.15	27	9.40	27	18.04	27	19.25	American.....	446.0	56.0	22.9	Boston, Mass.	General.	3,910	8,508	6,179
Tanker.																	

¹ For orders.

² Motor boat.

³ Launch.

⁴ Submarine.

⁵ Yacht.

⁶ Motor ship.

Fernale 2	27	20	20	27	20	30	28	9	10	28	10	43	Norwegian	Fern Line	382	0	53	3	25	0	Tampa, Fla.	Shanghai, China	(+)	6,470	6,082	4,222
Thomas H. Wheeler	27	20	53	27	20	55	28	11	54	28	14	06	American	Standard Shipping Co.	425	0	57	2	23	0	Norfolk, Va.	Los Angeles, Calif.	Ballast	7	481	5,004
Barbara Cates	28	4	10	28	8	10	28	13	43	28	14	50	American	Sutton & Christenson	409	5	54	2	17	9	Baltimore, Md.	Tacoma, Wash.	General	3	595	6,004
Carlo Colo	28	4	05	28	8	05	28	15	11	29	7	08	Chilean	Cullen Government	126	6	27	0	11	9	Greenock, England	Valparaiso, Chile	Ballast	3	388	78
Wadmore	26	27	05	28	13	30	28	20	54	28	21	55	British	Moor Line, Ltd.	375	0	52	0	14	6	Lisbon, Portugal	Los Angeles, Calif.	Ballast	6	050	4,615
Wadmore	26	17	15	28	13	30	28	11	20	29	12	30	British	Associated Oil Co.	340	0	49	2	18	6	New York, N. Y.	Los Angeles, Calif.	Ballast	4	613	2,996
West India	28	6	35	28	20	20	28	12	17	29	13	15	American	McCormick S. S. Co.	410	5	54	2	18	11	Buenos Aires, Arg.	San Francisco, Calif.	General	2	828	6,033
St. Maria	28	10	28	28	20	19	28	8	54	29	12	30	American	Grace Line	466	0	64	0	24	2	New York, N. Y.	Talcahuano, Chile	General	1	767	10,526
Dragon	28	7	00	29	6	00	29	12	18				British	British Government	445	0	46	0	16	6	Bermuda, B. W. I.	Vancouver, B. C.	Ballast	1	636	6,080
Benjamin Brewster	28	19	15	29	6	10	29	13	54	29	16	35	American	Standard Shipping Co.	411	6	53	2	21	0	Baltimore, Md.	Los Angeles, Calif.	Ballast	6	228	4,487
President Garfield	29	6	00	29	7	25	29	14	28	29	22	15	American	Dollar Line	502	1	62	2	27	04	New York, N. Y.	Round the world.	General	3	049	12,583
San Gabriel	28	21	30	29	7	25	29	14	58	29	15	55	American	Pac-Atlantic S. S. Co.	386	8	52	2	17	09	Baltimore, Md.	Seattle, Wash.	(+)	2,945	5,719	4,023
Florence Luckenbach	29	4	45	29	8	10	29	15	40	29	16	45	American	Luckenbach Line	401	8	52	2	21	0	New Orleans, La.	Seattle, Wash.	General	4	856	6,002
Lundy	29	6	40	29	8	45	29	16	09	29	20	10	Danish	W. Indian Trading Co.	357	0	51	0	15	0	Aalborg, Denmark	Los Angeles, Calif.	General	2	544	4,973
San Jose	28	14	10	29	10	05	29	16	49	29	18	30	American	Union Fruit Co.	330	0	44	6	17	6	Cristobal, C. Z.	San Francisco, Calif.	General	1	46	3,675
San Jose	29	11	15	29	11	25	29	18	25	29	19	45	American	Dimit S. S. Corp.	410	5	54	0	17	0	Philadelphia, Pa.	Seattle, Wash.	General	2	312	6,694
San Jose	28	10	05	29	11	37	29	18	25	29	22	40	Colombian	National Navigation Co.	107	0	23	0	8	6	Cristobal, C. Z.	Buenaventura, Col.	General	1	110	262
Cañca	28	20	35	30	6	05	30	13	04	31	9	30	American	U. S. Navy	445	0	58	2	35	3	Hampton Rds., Va.	Manila, P. I.	General	583	993	966
Chamont	30	3	50	30	6	20	30	14	14	30	20	51	British	Com'ch & Dom. Line	466	0	59	0	24	6	Napier, N. Z.	Shanghai, China	General	4	325	9,226
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
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Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha	385	0	51	0	26	0	Newport News, Va.	Yokohama, Japan	General	7	453	6,206
Port Durand	29	23	10	30	7	20	30	14	38	30	15	40	Japanese	Kokusai Kisen Kaisha												

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13 Motor ship.

13 Motor ship.

as Fruit, wheat, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam, water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Pacific Pine	25	5.15	25	8.39	25	18.50	American	Dimon S. S. Corp.	410.5	54.3	26.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,360	6,583	4,808
Santa Barbara ¹⁶	25	5.20	25	10.12	25	23.58	American	Grace Line.	466.0	64.0	23.0	Talcahuano, Chile	New York, N. Y.	General.	3,114	10,087	6,633
Pennsylvania	25	10.40	26	6.12	26	13.55	American	Panama-Pacific Line.	586.4	80.3	30.0	San Francisco, Cal.	New York, N. Y.	General.	9,500	25,262	18,194
Dixie Arrow ¹	25	14.35	26	6.42	26	14.30	American	Standard Transp. Co.	468.3	62.7	28.0	Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,267	9,714	7,140
Real ¹⁶	26	2.00	26	6.54	26	16.30	Panamanian	Haus Elliott.	62.0	18.0		Balboa, C. Z.	Cristobal, C. Z.	Bananas.	38	46	22
New Jersey ¹	26	2.00	26	7.12	26	15.05	American	The Texas Co.	416.8	56.1	27.0	S. Luis Obispo, Cal.	Providence, R. I.	Gasoline.	7,331	6,925	4,982
Horace	26	7.30	26	8.48	26	16.20	American	Luckenbach Line.	445.0	58.0	26.0	Portland, Oreg.	Boston, Mass.	General.	7,556	8,699	6,363
Portland Mar.	26	8.30	26	9.14	26	18.00	Japanese	Kokusai Kisen Kaisha	385.0	51.0	25.0	Nagasaki, Japan.	Boston, Mass.	Sugar.	7,282	5,919	4,424
Pennsylvania	26	8.40	26	9.27	26	19.06	American	Amer.-Hawaiian Line.	407.7	53.7	25.0	Portland, Oreg.	Boston, Mass.	General.	6,011	7,107	5,041
Colombia	25	15.43	26	11.18	26	13.15	American	Panama Mail S. S. Co.	380.0	48.3	24.0	San Francisco, Cal.	New York, N. Y.	Coffee, general.	2,784	6,015	4,281
Dredthick ¹⁶	26	22.30	27	6.11	27	13.45	Dutch	Holland-America Line.	485.5	62.3	30.0	Vancouver, B. C.	Rotterdam, Holland	General.	10,241	10,793	7,619
Luwigshafen	26	23.30	27	6.47	27	14.55	German	North German Lloyd	393.4	54.3	25.0	Valparaiso, Chile	Hamburg, Germany	General.	6,002	6,600	4,622
C. O.	27	4.00	27	7.39	27	16.30	British	Inter. Petroleum Co.	565.7	75.6	35.0	Talara, Peru	Halifax, N. S.	Crude oil.	21,151	16,780	9,885
Wind Rush	27	5.00	27	8.14	27	16.40	American	Shepard S. S. Co.	410.0	54.2	25.0	Seattle, Wash.	Portland, Me.	Lumber, general.	7,367	6,558	4,753
Mahana	27	1.50	27	8.27	27	18.00	British	Shaw, Savill & Albion.	500.9	63.3	25.0	Pt. Chalmers, N. Z.	London, England	Frozen, general.	6,447	12,083	8,503
Charles	27	8.10	27	9.03	27	17.50	American	Arrow Line	409.7	54.2	25.0	Aberdeen, Wash.	Baltimore, Md.	Lumber.	7,475	6,693	4,903
Sandar ¹⁶	27	16.15	28	6.11	28	13.40	Norwegian	Anglo-Saxon Pet. Co.	451.9	59.2	25.0	San Francisco, Cal.	Curacao, D. W. L.	Gasoline.	10,663	7,944	5,408
San Jose	27	11.40	28	6.23	28	14.10	American	United Fruit Co.	330.0	44.6	17.0	San Francisco, Cal.	Cristobal, C. Z.	General.	468	3,675	2,359
Atlantic Sun	28	2.50	28	7.10	28	15.05	American	Sun Oil Co.	429.3	59.2	26.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	8,977	7,567	5,283
Kamak	28	0.03	28	8.09	28	15.35	Dutch	Hamburg-American Line	439.6	55.7	25.7	Valparaiso, Chile	Hamburg, Germany	General.	7,654	7,421	5,373
Harlan	28	3.00	28	8.46	28	17.20	Dutch	Royal Neth. S. S. Co.	361.3	50.0	21.0	Valparaiso, Chile	Hamburg, Germany	General.	5,193	4,759	3,660
Atlantic City	28	5.30	28	9.13	28	17.15	British	Parsons South Line	411.7	54.5	27.9	Vancouver, B. C.	Cardiff, England	General.	8,604	6,555	4,659
Washington	28	12.10	28	12.55	28	20.35	American	The Texas Co.	425.8	57.0	25.6	Los Angeles, Calif.	Providence, R. I.	Gasoline.	9,045	7,484	5,216
West Cactus	28	22.30	29	6.35	29	13.30	Japanese	Kokusai Kisen Kaisha	385.0	51.0	26.5	Manila, P. I.	Atlantic pta., U. S.	Sugar.	7,300	5,919	4,389
Colombian	29	0.10	29	7.36	29	14.40	American	Pac.-Arg. Brazil Line.	410.3	54.0	21.0	Powder River, B. C.	Buenos Aires, Arg.	Lumber, general.	3,806	6,625	5,046
Willaro	29	1.15	29	7.18	29	15.05	American	Amer.-Hawaiian Line.	404.6	52.9	24.0	San Francisco, Cal.	Boston, Mass.	General.	4,710	6,780	4,450
Lisbon Mar.	29	4.00	29	8.16	29	15.55	American	Williams S. S. Co.	386.8	52.2	24.0	Philadelphia, Wash.	Baltimore, Md.	General.	6,552	5,684	4,070
San Vicente	29	20.00	29	9.37	29	16.55	Japanese	Nippon Yusen Kaisha	445.0	58.9	26.0	Manila, P. I.	New York, N. Y.	General.	8,083	8,015	5,849
Santa Rita ¹⁶	29	11.30	29	11.56	29	19.10	American	Quaker Line.	410.5	54.3	26.0	Pt. Alberni, B. C.	Philadelphia, Pa.	Lumber, general.	8,550	6,572	4,900
Big Bear ¹⁶	29	14.30	29	6.15	30	13.05	American	Grace Line.	370.0	53.2	23.0	Valparaiso, Chile	New York, N. Y.	Ballast.	3,623	6,254	4,090
Acordo ¹	29	17.45	30	6.10	30	15.40	Panamanian	L. P. Foster.	60.0	16.6		Balboa, C. Z.	Cristobal, C. Z.	General.	7,600	6,189	4,235
Cerro	30	2.00	30	6.51	30	14.30	British	Anglo-Saxon Pet. Co.	412.0	53.4	24.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	7,693	1,572	1,011
Maha	30	2.45	30	7.06	30	15.20	German	Hamburg-American Line	227.2	34.4	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	5,891	11,116	7,894
Steel Inventor	30	5.35	30	7.39	30	15.45	British	Shaw, Savill & Albion.	477.6	63.1	24.0	Lyttelton, N. Z.	London, England	Frozen, general.	7,753	6,611	5,450
Benecluch	30	11.00	30	8.29	30	16.45	American	Islethman S. S. Lines	424.2	56.2	25.4	Vancouver, B. C.	Avonmouth, Eng.	General.	7,555	6,221	4,297
Stam ¹⁶	30	13.15	30	12.00	30	20.30	British	Can-Amcr. S. S. Co.	410.6	54.1	24.0	Vancouver, B. C.	Rotterdam, Holland	General.	9,227	7,068	5,368
Schwartzwald	30	16.50	30	13.56	30	21.51	Danish	East Asiatic Co.	389.4	55.2	26.0	Seattle, Wash.	Copenhagen, Den.	General.	7,780	6,571	4,607

¹⁶ For orders.¹⁷ Yacht.¹⁸ Motor ship.¹⁹ Tanker.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 25.	Perou.	French Line.	St. Nazaire via wayports.	May 24.	No. 144-M ²⁰ .	Pan American-Grace Airways.	Pimental via wayports.
May 25.	Darien C-35 ²⁰ .	Seadla Airplane Co.	Barranquilla via wayports.	May 24.	No. 9688 ²⁰ .	Pan American Airways.	San Salvador and wayports.
May 26.	Pastores.	United Fruit Co.	Cartagena, Colombia.	May 24.	No. 669-M ²⁰ .	Pan American Airways.	Miami via wayports.
May 26.	Inapacuna ²¹ .	A. Tagaropoulos.	Colon, Rep. of Panama.	May 24.	Colombia.	Royal Netherlands S. S. Co.	Amsterdam & wayports.
May 26.	Anachucuna ²¹ .	A. Tagaropoulos.	Colon, Rep. of Panama.	May 24.	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
May 27.	Camden.	United Fruit Co.	Curacao, D. W. I.	May 26.	Anachucuna ²¹ .	A. Tagaropoulos.	Colon, Rep. of Panama.
May 27.	No. 144-M ²⁰ .	Pan American-Grace Airways.	Pimental via wayports.	May 26.	Inapacuna ²¹ .	Pan American Airways.	San Salvador & wayports.
May 27.	Iriona.	United Fruit Co.	New Orleans, La.	May 27.	No. 9670 ²⁰ .	United Fruit Co.	New York via wayports.
May 27.	Metapan.	United Fruit Co.	New York via Kingston.	May 27.	Pastores.	United Fruit Co.	Miami via wayports.
May 28.	No. 9685 ²⁰ .	Pan American Airways.	San Salvador & wayports.	May 27.	No. 668-M ²⁰ .	Pan American Airways.	New York via Kingston.
May 28.	Esfuerzo ²² .	J. Asmusen.	Bluefields, Nicaragua.	May 27.	Perou.	French Line.	Have via wayports.
May 28.	No. 670-M ²⁰ .	Pan American Airways.	Miami via wayports.	May 27.	Camden.	United Fruit Co.	Port Limon, Costa Rica.
May 28.	Bogota.	Colombian S. S. Line.	New York via wayports.	May 28.	Iriona.	United Fruit Co.	Port Limon via Bocas.
May 29.	Calamarcas.	United Fruit Co.	New Orleans via Habana.	May 28.	Metapan.	Seadla Airplane Co.	Colombian ports.
May 29.	Cefalu.	Standard Fruit & S. S. Co.	New Orleans via wayports.	May 28.	Darien C-35 ²⁰ .	Pan American-Grace Airways.	Barranquilla & wayports.
May 29.	Pearl Marie ²² .	G. I. Bryan.	Colon, Rep. of Panama.	May 29.	No. 144-M ²⁰ .	Colombian S. S. Line.	Talara via wayports.
May 30.	Annetta I. ²¹ .	P. W. Hamilton.	Colon, Rep. of Panama.	May 29.	Bogota.	G. I. Bryan.	New York via wayports.
May 30.	Standard Oil Co.	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	May 29.	Pearl Marie ²² .	United Fruit Co.	Bluefields, Nicaragua.
May 30.	No. 755-Y ²⁰ .	Standard Oil Co.	Maracabo via wayports.	May 29.	Calamarcas.	Standard Fruit & S. S. Co.	New York via wayports.
May 30.	No. 669-M ²⁰ .	Pan American Airways.	Miami via wayports.	May 30.	Carmelita ²² .	United Fruit Co.	Colon, Rep. of Panama.
May 30.				May 30.	Annetta I. ²¹ .	P. W. Hamilton.	Colon, Rep. of Panama.
May 30.				May 30.	Cefalu.	Standard Fruit & S. S. Co.	New Orleans & wayports.
May 30.				May 30.	Esfuerzo ²² .	J. Asmusen.	Bluefields, Nicaragua.

²⁰ Air mail carrier. ²¹ Motor boat. ²² Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 26.....	El Libertador ²³	Hans Elliott.	Panama Bay, R. P.	May 26.....	Sveadrott ²⁴	Knutson Line.	Antofagasta, Chile.
May 26.....	Sambu ²³	Grace Line.	Panama Bay, R. P.	May 26.....	El Libertador ²³	Hans Elliott.	Panama Bay, R. P.
May 27.....	Cuzco.....	Tacoma, Wash.	Tacoma, Wash.	May 27.....	Sambu ²³	Hans Elliott.	Panama Bay, R. P.
May 27.....	Gymete ²	Anglo-Saxon Petroleum Co.	Los Angeles, Calif.	May 28.....	Cuzco.....	Grace Line.	Valparaiso, Chile.
May 28.....	Frost ²⁴	West India Oil Co.	Talara, Peru.	May 29.....	Gymete ²	Anglo-Saxon Petroleum Co.	Los Angeles, Calif. ²⁵
May 28.....	.....	.....	.....	May 28.....	Frost ²⁴	West India Oil Co.	Talara, Peru.

²³ Tanker. ²⁴ Motor schooner. ²⁵ For orders.

²⁶ Other than ships passing through the Canal.]

Colon Fill Completed.

Work on a hydraulic fill involving 37 acres has been recently completed on property of the Panama Railroad in Colon. The fill, involving six blocks of swamp land south of Ninth Street, was begun on November 1, 1930, by forces of the Dredging Division of The Panama Canal. The material was removed from Folks River by dredge *No. 86*, and pumped to the filled-in area with the assistance of a relay pump barge. The total amount of material remaining in place after the run-off amounted to 489,100 cubic yards.

The land was filled in to meet the demand for additional land in the city suitable for building sites. After proper settlement of the fill the land will be improved with modern structures by the lessees.

Regulating Level of Gatun Lake.

THE PANAMA CANAL, DEPARTMENT OF OPERATION AND MAINTENANCE,
BALBOA HEIGHTS, C. Z., May 28, 1931.

To all concerned:

1. The following schedule for maintaining Gatun Lake during the 1931 rainy season will be adhered to as closely as conditions permit.

2. The lake will be allowed to fill to elevation 85.50 before any water is wasted over the spillway. However, spilling for sanitary purposes or for exhibition will be permitted upon approval of the Chief of Surveys. The lake will be held between elevations 85.50 and 86.00 until October 1; filled to elevation 86.50 in October; and to elevation 87.00 after November 1, to be varied slightly according to water supply conditions. After spillage is begun, a variation of 0.50' from above elevations will be allowed to lessen the number of gate operations.

J. L. SCHLEY,
Engineer of Maintenance.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective May 25, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.....	Lb.	\$0.24
Brass, sheet, average.....	Lb.	.24
Bronze, Tobin, average.....	Lb.	.24
Gasoline, motor grade.....	Gal.	.105
Metal, yellow.....	Lb.	.23
Oakum, Navy, spun.....	Lb.	.23
Oakum, Navy, unspun.....	Lb.	.13
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.....	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.....	Gal.	.28
Oil, burning, Colza.....	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.....	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.....	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.....	Gal.	.39
Oil, kerosene, in drums.....	Gal.	.07
Oil, marine engine.....	Gal.	.49
Paint, lead, white, dry.....	Lb.	.14
Paint, lead, white, in oil.....	Lb.	.11
Paint, zinc oxide, dry.....	Lb.	.10
Paint, zinc oxide, in oil.....	Lb.	.11
Grease, gear, chain and wire rope, lubricating.....	Lb.	.05
Grease, yellow, cup, No. 3.....	Lb.	.08
Grease, yellow, cup, No. 5.....	Lb.	.09
Soda, ash.....	Lb.	.03
Waste, cotton, colored.....	Lb.	.13
Waste, cotton, white.....	Lb.	.16

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending May 31, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
Ancon	Panama R. R. S. S. Line		May 24		920
Baralt	Royal Netherlands S. S. Co.		May 24		208
Colombia	Royal Netherlands S. S. Co.		May 24		975
Eisenach	North German Lloyd		May 24		27
Virgilio	Italian S. S. Line	May 24	May 25	327	22
Colombo	Italian S. S. Line	May 24	May 26	12	1,096
Caldas	National Navigation Co.		May 25		138
Santa Barbara	Grace Line	May 25	May 25	103	354½
Syra	Hamburg-American Line	May 25	May 25	28	281
Schwaben	North German Lloyd	May 25	May 25	44	50
Pennsylvania	Texas Oil Co.	May 25	May 26	1,659	(²)
Tai Ping Yang	Barber Wilhelmsen Line	May 25	May 26	31	185
Perou	French Line	May 25	May 27	59	443
Cauca	National Navigation Co.	May 25	May 29	164	112
Pastores	United Fruit Co.	May 26	May 27	86	852
Colombia	Panama Mail S. S. Co.	May 26	May 27	1,022	35
Boskoop	Royal Netherlands S. S. Co.	May 26	May 27	105	186½
Drechtijk	Holland-America Line	May 27	May 27	65	258
Iriona	United Fruit Co.	May 27	May 27	671	5
Camden	United Fruit Co.	May 27	May 27	4,642	(²)
Metapan	United Fruit Co.	May 27	May 28	1,056	133
Ludwigshafen	North German Lloyd	May 27	May 28	(¹)	502
Santa Maria	Grace Line	May 28	May 28	360	270
West Ira	McCormick S. S. Co.	May 28	May 28	28	136
Karnak	Hamburg-American Line	May 28	May 28	25	(²)
Haarlem	Royal Netherlands S. S. Co.	May 28	May 29	133	4½
San Jose	United Fruit Co.	May 28	May 29	480	156
Bogota	United Fruit Co.	May 28	May 29	9½	23
Esfuerzo	J. Amussen	May 28	May 30	11	35
Calamares	United Fruit Co.	May 29	May 29	221	75
Pearl Marie	R. Feuillebois	May 29	May 29	(¹)	37
Lisbon Maru	Nippon Yusen Kaisha	May 29	May 29	88	(²)
Cefalu	Standard Fruit & S. S. Co.	May 29	May 30	241	356
Cali	Roland Line		May 30		68
Santa Rita	Grace Line	May 30	May 30	235	89
Acajutla	Pacific Steam Navigation Co.		May 30		571
Cerigo	Hamburg-American Line	May 30		693	
Nosa Prince	N. O. & S. A. S. Co.	May 30	May 31	245	124
Iriona	United Fruit Co.	May 31	May 31	51	380
Rugia	Hamburg-American Line	May 31		28	
Schwarzwald	Hamburg-American Line	May 31	May 31	31	(²)
President Grant	Dollar Line	May 31	May 31	564	(²)
San Clemente	Quaker S. S. Line	May 31		311	

¹ No cargo discharged.² No cargo laded.³ 425 pounds.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending May 30, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Durazzo	Hamburg-American Line	May 23	May 23		66
Eisenach	North German Lloyd	May 24	May 25	116	
Tai Ping Yang	Barber Wilhelmsen Line	May 24	May 25	461	
Santa Barbara	Grace Line	May 25	May 25	12	
Colombia	Panama Mail S. S. Co.	May 25	May 26	52	
Cuzco	Grace Line	May 26	May 28	754	
Pennsylvania	The Texas Co.	May 26	May 27	3,748	
Gymeric	Anglo-Saxon Petroleum Co.	May 27	May 29	8,940	
Boskoop	Royal Netherlands S. S. Co.	May 27	May 27	149	
San Jose	United Fruit Co.	May 27	May 28	271	44
Lisbon Maru	Nippon Yusen Kaisha	May 28	May 29	97	
Frost	West India Oil Co.	May 28	May 28	250	
Santa Rita	Grace Line	May 29	May 30		2

Official Circular.

Acting Marine Superintendent.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., May 28, 1931.

To all concerned.—During the absence of Capt. C. H. Woodward, U. S. N., on leave, effective May 29, 1931, at noon, and until Capt. William Ancrum, U. S. N., reports for

duty with The Panama Canal, Commander W. R. Smith, U. S. N., in addition to his duties as Captain of the Port, Cristobal, will act as Marine Superintendent and Chairman, Board of Admeasurement.

During the same period, Commander G. C. Barnes, U. S. N., will act as Chairman, and Assistant Port Captain A. F. Wescott as Member, Board of Local Inspectors.

H. BURGESS,
Governor.

Merchandise Shipped to Canal Zone for Orders.

The Panama Railroad Company, a New York corporation, of which the stock is now owned by the United States Government, will warehouse "for orders" at its piers and warehouses at Balboa and Cristobal, Canal Zone, nonperishable and nondangerous merchandise, excepting alcoholic liquors.

The rates are as follows:

(a) For handling cargo from ship's side to storage place, \$1 per ton of 2,000 pounds or 40 cubic feet on general merchandise, and one-half of the transfer rates provided by Item 34, Panama Canal Tariff No. 10, on other commodities.

(b) For handling cargo from storage place to ship's side, *i. e.*, for delivering or reforwarding it, the same rates as for receiving and storing, as per (a), above. The minimum charge for handling any shipment taken out of storage is \$1.

(c) For storage: First 35 days free; thereafter, 3 cents per day or fraction thereof per ton of 2,000 pounds or 1½ cents per day or fraction thereof per ton of 40 cubic feet.

Special rates on special commodities in large quantities may be obtained on request.

Various lines operating out of Cristobal and Balboa to the west coast of Central and South America will accept their proportion of the through rate for the haul beyond the Isthmus, as explained in the following paragraph:

By virtue of the Canal Zone for Orders arrangement shippers are enabled to consign cargo to the Isthmus and subsequently to re consign it to any port beyond the Isthmus to which there is a through rate from port of origin without sacrificing their right to the through freight rate. This means that when a shipment moves from, say, New York to the Canal Zone, usual local rates will be charged to Cristobal or Balboa, as the case may be; but should the owner wish to reforward to any other port to which there is a through rate from port of origin, he may do so upon payment of the receiving carrier's proportion of the through rate from port of origin to port of ultimate destination, and upon evidence that the shipment, or any part of it, has moved beyond the Isthmus, the initial carrier will refund the difference between its proportion of the through rate applicable and the local rate.

In addition to re consigning beyond the Isthmus, cargo billed Cristobal for Orders may be re consigned to Panama City or line points on the Panama Railroad on the basis of through rates from port of origin to Panama City. In this case the Panama Railroad Company's charges will be the difference between the rate charged to Cristobal by the ocean carrier and the through rate from port of origin to Panama City, and the necessary adjustments with the ocean carrier will be made by the Panama Railroad Company without inconvenience to shippers or consignees. The handling charge from storage place to cars is the same as from storage place to ship's side.

Cargo deposited in Hold for Orders Warehouse, Cristobal, which consignees desire transferred to Hold for Orders Warehouse, Balboa, will be assessed a charge of \$1 per ton on general cargo and one-half the transfer rates on other commodities for handling from the warehouse into cars at Cristobal, and a second charge of the same kind for handling from cars into warehouse at Balboa. The same charge will again apply when the cargo is reforwarded from, or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on Hold for Orders cargo discharged from vessels at Balboa.

Cargo consigned to Hold for Orders, Balboa, arriving at Cristobal piers, and/or cargo consigned to Hold for Orders, Cristobal, on which by previous arrangement the destination has been changed to Hold for Orders, Balboa, prior to arrival of the vessel, will be assessed one handling charge of \$1 per ton on general cargo or one-half of the transfer rates on other commodities for handling from shipside across piers and into cars at Cristobal and from cars into the Hold for Orders Warehouse, Balboa. The same charge will apply when the cargo is reforwarded from or delivered locally at Balboa. The same handling charges will apply, *vice versa*, on cargo moving in the opposite direction.

There are no special forms for use in shipping except the warehouseman's order to release the cargo for shipment ("Authority to Deliver Cargo from Storage on Piers"). Shipper takes out his bill of lading and consular invoice and the cargo moves as regular outward local.

Samples of the forms used, "Negotiable Warehouse Receipt," and "Authority to Deliver Cargo from Storage on Piers," will be supplied on request to the Panama Railroad Co., Balboa Heights, C. Z., or 24 State Street, New York City.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., June 10, 1931.

No. 45.

Tanker Traffic Through the Panama Canal in May, 1931.

During the month of May, 1931, 61 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 342,776, on which tolls of \$303,243.43 were paid. Cargo amounted to 330,034 tons, all mineral oils.

In point of net tonnage, tanker traffic decreased 32.6 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 27.6 per cent.

Tank ships comprised 14.3 per cent of the total commercial transits through the Canal during the month; made up 15.7 per cent of the total Panama Canal net tonnage; were the source of 15.8 per cent of the tolls collected; and carried 17.1 per cent of the total cargo through the Canal.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of May, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for May, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	9	47,872	\$36,089.72	8,392
German.....	1	4,340	3,124.80	.....
Norwegian.....	3	17,542	12,503.07	.....
Swedish.....	1	7,123	5,128.56	.....
United States.....	17	91,618	69,070.53	5,348
Total, May, 1931.....	31	168,495	125,916.68	13,740
Total, April, 1931.....	31	178,523	131,825.47	16,767
Total, March, 1931.....	35	193,420	144,362.80	9,382
Total, May, 1930.....	48	272,155	202,856.35	33,928
<i>Pacific to Atlantic.</i>				
British.....	4	26,163	28,000.00	53,092
Norwegian.....	5	28,567	30,140.00	53,461
United States.....	21	119,551	119,186.75	209,741
Total, May, 1931.....	30	174,281	177,326.75	316,294
Total, April, 1931.....	38	225,203	231,846.94	403,030
Total, March, 1931.....	30	168,520	168,110.98	293,411
Total, May, 1930.....	44	236,762	242,891.54	422,174

The following tabulation shows the tanker traffic through the Canal during May, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	20	105,152	\$77,218.02	1,600
United States to South America.....	1	4,326	3,114.72	.....
United States to Balboa.....	1	4,844	4,957.50	3,748
Canada to United States.....	1	4,235	3,049.20	.....
Canada to South America.....	2	17,602	12,673.44	.....
Mexico to South America.....	1	4,546	4,895.00	8,392
Europe to United States.....	3	17,341	12,485.52	.....
South Africa to United States.....	1	7,123	5,128.56	.....
North Africa to South America.....	1	3,326	2,394.72	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	20	114,776	115,748.75	209,741
United States to South America.....	1	4,775	3,438.00	.....
United States to West Indies.....	2	12,183	12,676.25	23,752
United States to Europe.....	4	20,619	21,778.75	37,309
South America to United States.....	1	4,326	4,633.75	7,941
South America to Canada.....	2	17,602	19,051.25	37,551

Of the tanker traffic passing through the Canal in May, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the two preceding months and for May, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles:</i>				
May, 1931.....	22	116,497	\$85,220.49	3,748
April, 1931.....	24	134,042	96,510.24	.....
March, 1931.....	26	146,574	107,033.60	3,000
May, 1930.....	33	190,213	139,975.35	14,359
<i>From Los Angeles:</i>				
May, 1931.....	20	115,283	116,952.50	212,030
April, 1931.....	26	147,531	152,761.60	266,202
March, 1931.....	20	115,950	115,424.75	199,722
May, 1930.....	32	173,014	177,384.65	311,898

Traffic by Nationality for May, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for May, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	11,836	8,709	13,729	8,436	\$9,158.99	2,443
British.....	53	289,863	210,587	345,818	210,242	234,501.24	102,143
Chilean.....	2	4,783	3,498	7,671	4,098	4,372.50	1,999
Colombian.....	5	731	712	1,113	716	862.10	782
Danish.....	8	38,963	26,950	43,775	27,292	30,814.50	15,876
Dutch.....	6	24,858	15,501	26,251	15,581	19,376.25	9,798
French.....	2	13,155	8,917	15,242	9,318	11,146.25	4,158
German.....	14	49,246	33,824	56,761	33,777	40,577.30	19,359
Italian.....	3	21,132	13,949	26,324	15,925	17,436.25	3,967
Japanese.....	7	39,852	32,618	50,917	32,340	40,570.05	44,102
Norwegian.....	15	73,441	47,903	81,016	48,075	54,492.32	35,263
Panamanian.....	2	44	48	90	58	36.00	.....
Swedish.....	6	32,067	22,997	56,488	28,344	23,627.55	11,063
United States.....	94	481,395	359,838	588,410	359,414	423,160.16	268,891
Total, May, 1931.....	219	1,081,366	786,051	1,313,605	793,616	910,131.46	519,844
Total, May, 1930.....	234	1,210,174	906,086	1,506,197	913,745	1,032,268.60	681,073
Total, May, 1929.....	278	1,329,095	1,011,384	1,668,713	1,014,479	1,164,303.77	920,360

* Includes naval vessel of 5,500 displacement tons.

* Includes Merchant Marine training vessel of 1,058 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	6,292	4,986	7,816	5,758	\$6,232.50	10,098
British.....	44	273,830	200,312	338,893	206,971	250,390.00	318,774
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,901
Colombian.....	4	570	550	880	550	678.20	621
Danish.....	3	14,936	9,682	15,841	9,820	12,102.50	24,337
Dutch.....	5	18,781	11,791	20,128	12,281	14,738.75	24,579
French.....	3	16,092	10,861	18,680	11,301	13,576.25	21,193
German.....	18	96,136	63,253	125,106	69,147	79,066.25	84,209
Italian.....	2	17,372	13,441	24,954	14,083	16,801.25	10,971
Japanese.....	8	41,273	34,741	51,991	34,115	42,914.90	51,733
Norwegian.....	14	72,512	51,578	86,630	53,533	64,472.50	117,966
Panamanian.....	4	7,030	3,735	6,987	3,743	4,652.47	6,807
Swedish.....	5	22,769	16,421	46,080	20,094	20,526.25	63,016
United States.....	97	511,328	387,899	635,084	388,200	482,877.65	668,403
Total, May, 1931.....	209	1,103,593	812,683	1,386,380	833,572	1,013,320.72	1,405,608
Total, May, 1930.....	245	1,208,459	908,637	1,511,430	918,912	1,130,630.00	1,580,543
Total, May, 1929.....	246	1,167,810	897,630	1,481,885	906,931	1,132,242.80	1,616,479

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	18,128	13,695	21,545	14,194	\$15,391.49	12,541
British.....	97	563,693	410,899	684,711	417,213	484,891.24	420,917
Chilean.....	3	9,455	6,931	14,981	8,074	8,663.75	4,900
Colombian.....	9	1,301	1,262	1,993	1,266	1,540.30	1,403
Danish.....	11	53,899	36,632	59,616	37,112	42,917.00	40,213
Dutch.....	11	43,639	27,292	46,379	27,862	34,115.00	34,377
French.....	5	29,247	19,778	33,922	20,619	24,722.50	25,351
German.....	32	145,382	97,077	181,867	102,924	119,643.55	103,568
Italian.....	5	38,504	27,390	51,278	30,008	34,237.50	14,938
Japanese.....	15	81,125	67,359	102,908	66,455	83,484.95	95,835
Norwegian.....	29	145,953	99,481	167,646	101,608	118,964.82	153,229
Panamanian.....	6	7,074	3,783	7,077	3,801	4,688.47	6,807
Swedish.....	11	54,836	39,418	102,568	43,438	44,153.80	74,079
United States.....	191	992,723	747,737	1,223,494	747,614	906,037.81	937,294
Total, May, 1931.....	428	2,184,959	1,598,734	2,699,985	1,627,188	1,923,452.18	1,925,452
Total, May, 1930.....	479	2,418,633	1,814,723	3,017,627	1,832,657	2,162,898.60	2,261,616
Total, May, 1929.....	524	2,496,905	1,909,014	3,150,598	1,921,410	2,296,546.57	2,536,839

¹ Includes naval vessel of 5,500 displacement tons.

² Includes Merchant Marine training vessel of 1,058 displacement tons.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 5, 1931.

No. 896.

Colombia, west coast, Buenaventura River entrance, Palmas Island Light, reported irregular. The following is quoted from Notice to Mariners No. 20, Washington, D. C., dated May 16, 1931:

The third officer of the German M. S. *Koenigsberg* reports that on the night of April 25, 1931, Palmas Island Light was observed to be showing 1 flash every 2.5 seconds.

Approximate position: 30° 53' 28" N., 77° 22' 12" W.

H. BURGESS,
Governor.

Ships' Chandlery Supplies.

Panama Canal Storehouses carry a Complete line of ships' chandlery supplies, available for sale to ships at C. I. F. cost plus 25 per cent surcharge which covers local freight, handling, and other costs.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, June 6, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Nosa Prince.	30	16 00	31	6 00	31	13 20	31	15 05	American.	N. O. & S. A. S. S. Co.	324 0	46 2	18 7	New Orleans, La	Talcahuano, Chile.	General.	2,031	3,983	2,570
Vulcan City.	30	20 52	31	7 10	31	14 33	31	15 40	British.	Reardon Smith Line.	420 4	54 5	12 0	Barry, England	Portland, Ore.	Ballast.	2,031	3,983	2,570
El Lobo.	31	11 40	31	11 50	31	18 30	31	19 55	British.	Anglo-Panama Offshoots.	385 2	51 0	19 0	Tenerife, Canary Is.	La Libertad, Panama	Ballast.	6,870	5,943	
San Silvestre.	31	13 05	31	13 20	31	20 52	31	22 00	British.	Anglo-Mexican Co.	420 5	54 6	26 0	Pro. Mexico, Mex	Valparaiso, Chile.	Ballast.	8,392	6,588	4,946
Herman Frasch.	31	18 00	31	18 10	1	9 13	1	10 34	American.	Texas Gulf Sulphur Co.	395 0	51 6	23 0	Galveston, Tex.	Tacoma, Wash.	Gas, fuel oil.	5,075	5,349	2,950
Aden Maru.	1	3 30	31	6 10	1	13 15	1	14 25	Japanese.	Kokusan Kisen Kaisha.	385 0	51 6	17 6	Newport News, Va.	Shanghai, China.	Tobacco.	1,889	6,203	4,672
Courageous.	1	4 15	1	7 10	1	14 35	1	15 35	American.	Roosevelt S. S. Co., S. B.	456 1	56 0	23 3	New York, N. Y.	Shanghai, China.	Gen., case oil.	6,197	8,208	5,850
S-14.	1	8 00	1	8 00	1	15 30	1	15 30	American.	U. S. Navy.	231 0	21 0	21 0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	2,120	8,856	6,559
S-16.	1	5 45	1	12 00	1	18 55	1	19 50	British.	Royal Mail S. P. Co.	450 0	58 0	20 3	Rotterdam, Holl'd	Vancouver, B. C.	General.	2,953	7,173	5,514
Maranta.	1	5 25	1	12 50	1	20 05	1	21 45	German.	Hamburg-American Line	409 8	55 0	18 6	Hamburg, Germany	Talcahuano, Chile.	General.	2,953	7,173	5,514
Albert Vogler.	1	6 40	1	14 10	1	20 20	2	20 35	American.	Panama Mail S. S. Co.	360 2	51 6	22 10	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,785	5,710	4,011
El Salvador.	1	5 55	1	14 40	1	21 00	2	12 23	American.	U. S. Army.	436 0	58 0	24 9	New York, N. Y.	Honolulu, T. H.	General.	655	6,476	4,682
Chateau.	31	20 35	1	15 10	1	21 55	1	23 10	American.	Quaker Line.	410 0	54 4	16 4	New York, N. Y.	Seattle, Wash.	General.	2,571	6,476	4,682
San Clemente.	1	17 25	1	18 00	2	9 24	2	10 20	American.	Standard Oil Co.	513 0	68 2	24 6	London, England	Los Angeles, Calif.	Ballast.	11,719	8,619	
California.	1	18 00	1	18 25	2	11 37	2	12 23	American.	Argonaut S. S. Co.	410 5	54 3	21 0	Baltimore, Md	Vancouver, B. C.	Steel, general.	3,981	6,567	4,917
Atlanta.	1	18 10	1	19 20	2	12 02	2	13 08	British.	Donaldson Line.	425 0	60 0	20 0	Chesgo, Scotland	Vancouver, B. C.	Ballast.	7,827	5,429	
Sulatra.	1	18 45	2	6 10	2	15 00	2	16 25	American.	Tidewater Oil Co.	480 0	66 0	24 0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,742	6,373	
Tidewater.	1	18 45	2	6 10	2	15 00	2	16 25	American.	Tidewater Oil Co.	480 0	66 0	24 0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,742	6,373	
Canadian.	2	2 15	2	6 15	2	15 12	2	16 30	British.	Can. Nat. Steamships.	400 0	52 0	22 0	Montreal, Canada.	Vancouver, B. C.	General.	5,310	5,885	4,073
Winner.	2	2 25	2	7 20	2	15 50	2	17 14	American.	Swayze & Hoyt.	386 8	52 2	19 0	Houston, Tex	Seattle, Wash.	General.	3,800	5,705	4,167
Point Salinas.	2	2 25	2	7 20	2	15 50	2	17 14	American.	Swayze & Hoyt.	386 8	52 2	19 0	Houston, Tex	Seattle, Wash.	General.	3,800	5,705	4,167
Texas.	2	6 20	2	7 20	2	15 50	2	17 14	American.	The Texas Co.	416 8	56 1	17 0	New York, N. Y.	Los Angeles, Calif.	Ballast.	6,782	4,830	
Grant.	2	6 45	2	8 25	2	16 44	2	17 52	British.	R. Chapman & Son.	415 0	55 0	18 0	Tyne, England	Los Angeles, Calif.	Ballast.	6,823	4,827	
Grainton.	2	6 25	2	9 40	2	16 53	2	18 10	British.	Andrew Weir & Co.	365 0	51 5	21 8	Galveston, Tex	Vancouver, B. C.	Ballast.	4,785	5,415	3,986
Newton Elm.	2	6 25	2	9 40	2	16 53	2	18 10	British.	Andrew Weir & Co.	365 0	51 5	21 8	Galveston, Tex	Vancouver, B. C.	Ballast.	4,785	5,415	3,986
Minnesota.	2	9 05	2	9 43	2	17 25	2	18 35	American.	Amer-Hawaiian Line.	407 7	53 7	20 8	Boston, Mass	Seattle, Wash.	General.	2,569	7,150	5,024
Sun.	2	9 40	2	10 35	2	18 07	2	19 08	American.	Sun Oil Co.	480 6	66 0	22 0	Miami, Fla.	Los Angeles, Calif.	Ballast.	9,620	6,476	
City of.	2	14 30	2	14 45	2	21 54	2	23 15	British.	Ellerman & Bucknall.	416 0	56 1	21 1	Philadelphia, Pa.	Sydney, Australia.	General.	4,100	7,987	6,093
Kimberly.	2	16 20	2	16 50	3	9 46	3	10 50	American.	Sun Oil Co.	481 0	66 0	24 0	Chester, Pa.	Los Angeles, Calif.	Ballast.	9,607	6,551	
Western Sun.	3	00 15	3	6 40	3	13 31	3	14 30	American.	Lockenbach Line	436 6	57 0	21 0	Boston, Mass	Seattle, Wash.	General.	3,733	8,543	6,427
Edward.	3	00 15	3	6 40	3	13 31	3	14 30	American.	Lockenbach Line	436 6	57 0	21 0	Boston, Mass	Seattle, Wash.	General.	3,733	8,543	6,427
S-48.	3	10 20	3	8 35	3	14 36	3	15 15	American.	U. S. Navy.	240 0	21 0	21 0	Cristobal, C. Z.	Balboa, C. Z.	Ballast.	5,756	4,139	
Amertown.	3	10 20	3	10 30	3	17 05	3	18 15	British.	R. Chapman & Son.	409 6	54 0	16 0	Tyne, England	Pacific I.	Ballast.	7,728	7,982	5,911
Livingston.	3	18 35	3	18 50	4	9 37	4	11 04	American.	Tampa Intercoast Co.	434 3	57 7	22 0	New Orleans, La	Cebu, P. I.	Case oil, general.	7,728	7,982	5,911
Roe.	3	19 30	4	6 05	4	14 28	4	15 50	American.	Richfield Oil Co.	462 9	60 0	21 0	New York, N. Y.	Los Angeles, Calif.	Ballast.	8,491	6,065	

* Motor ship.

* Motor ship.

* Transport.

* Submarine.

* Tanker.

Standard Arrow	4	6	30	4	7	25	4	15	06	4	16	30	American	4	47	6	62	7	23	2	Beaumont, Texas.	Los Angeles, Calif.	Batching oil	8,457	9,698	6,783
Tatsuma Maru	4	9	45	4	10	00	4	16	59	4	18	12	Japanese	4	23	0	56	0	26	7	Port Tampa, Fla.	Yokohama, Japan.	Cotton, phosph.	7,850	6,763	4,959
Honzaka	4	11	35	4	12	40	4	17	59	4	19	20	British	3	33	0	53	0	19	6	New York, N. Y.	Fremantle, Aust. lia	General	2,530	6,372	4,629
Annie Johnson	3	00	30	4	12	40	4	17	59	4	19	20	Swedish	3	33	0	53	0	19	6	Stockholm, Sweden	Vancouver, B. C.	General	2,311	6,650	4,919
Redeuter	4	9	10	4	13	50	4	20	53	5	10	10	French	3	35	0	52	0	21	0	Dunkirk, France.	Noumea, N. Calid	General	2,702	5,503	3,772
Madriton	4	19	15	5	9	10	5	9	10	5	10	10	British	3	35	0	52	0	21	0	S. Shields, England	Vancouver, B. C.	Ballast	6,823	4,797	
President McKinley	4	15	00	5	6	00	5	12	13	5	21	30	American	5	16	2	72	2	25	9	New York, N. Y.	Manila, P. I.	General	1,603	15,286	10,498
Matara	4	23	35	5	6	15	5	13	25	5	23	58	British	5	16	2	80	3	24	9	London, England	()	General	3,500	13,500	9,233
Tai Yang	4	21	20	5	7	20	5	14	29	6	00	12	American	5	16	2	63	0	27	6	New York, N. Y.	San Francisco, Cal	General	2,567	25,254	18,170
Teno	5	23	45	5	9	25	5	15	01	5	17	05	Norwegian	4	21	8	60	6	25	6	Taku Bar, China	General	5,722	10,009	7,075	
Yorkmar	5	00	55	5	9	40	5	16	34	5	17	40	Chilean	4	21	8	54	2	20	0	Valparaiso, Chile	Steel, general	1,111	7,764	4,672	
England Maru	5	2	00	5	10	40	5	17	30	5	18	50	American	4	21	8	56	0	23	3	Seattle, Wash.	General	4,033	6,757	4,802	
Munindes	5	2	40	5	11	00	5	18	05	5	19	30	Japanese	4	21	8	385	0	51	22	1	Shanghai, China	Phosphate, etc.	4,432	6,214	4,665
Opawa	5	4	15	5	12	10	5	19	30	5	20	00	British	4	21	8	370	0	53	0	Baltimore, Md	General	3,431	5,525	4,876	
Caldas	2	16	40	5	12	00	5	19	30	5	22	45	Colombian	4	21	8	470	0	67	3	Avonmouth, Eng	General	4,432	6,214	4,665	
Virginian	5	11	15	5	13	10	5	20	15	5	22	15	American	4	21	8	116	0	21	0	Cristobal, C. Z.	General	65	211	124	
Tiberton	5	13	45	5	14	10	5	21	25	5	23	59	British	4	21	8	491	5	58	2	Boston, Mass.	Buenaventura, Col	General	2,400	10,491	7,601
Caudan	5	15	05	5	15	10	5	23	40	6	6	33	British	4	21	8	400	0	52	4	Manchester, Eng	Vancouver, B. C.	Ballast	5,699	4,126	
Transporter	4	16	50	5	20	25	6	9	39	6	10	40	German	4	21	8	400	0	52	0	Montréal, Canada	Adelaide, Australia	General	4,201	6,228	4,491
Portland	3	18	25	6	6	00	6	13	14	6	21	30	American	3	39	0	61	0	22	8	Hamburg, Germany	Vancouver, B. C.	General	3,852	9,139	6,066
Vega	30	15	20	6	6	00	6	14	00	6	15	50	German	3	39	0	300	0	54	2	Roston, Mass	Puget Sd., Wash.	General	3,631	1,572	1,011
Cerigo	4	14	25	6	7	10	6	14	46	6	15	55	American	3	39	0	227	0	34	4	Cristobal, C. Z.	Guayaquil, Ecuador	General	298	14,538	4,480
Sea Thrush	6	00	35	6	9	55	6	17	02	6	18	07	American	3	39	0	550	0	72	0	Norfolk, Va.	Cruz Grande, Chile	Ballast	2,300	6,625	4,841
Steel Trader	6	3	40	6	10	19	6	18	01	6	19	13	American	3	39	0	410	0	54	2	New London, Conn.	Seattle, Wash	General	8,289	7,611	5,450
Santa Teresa	5	20	20	6	12	35	6	19	00	7	1	07	American	3	39	0	424	0	56	2	Mobile, Ala	Vancouver, B. C.	Steel, etc.	1,794	5,726	4,086

° Auxiliary.

7 Iron, steel, and general.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Pat Doherty	30	21	59	31	6	16	31	13	55	31	13	55	American	430	0	59	2	27	0	Los Angeles, Calif	Baltimore, Md.	Gasoline	9,105	7,773	5,634
Benjamin Franklin	31	00	15	31	7	16	31	15	25	1	11	15	Norwegian	430	0	59	2	27	0	Vancouver, B. C.	Oslo, Norway	General	8,437	9,081	6,140
President	31	4	22	31	7	37	31	15	55	31	21	27	American	517	0	72	2	27	3	Manila, P. I.	New York, N. Y.	General	4,128	15,234	10,470
Grant	31	6	45	31	8	09	31	16	55	31	22	20	American	309	2	48	2	19	3	Abukani	Philadelphia, Pa.	Sugar	4,080	3,363	2,119
Fairfield	31	19	25	1	6	35	1	13	50	1	13	50	Japanese	385	0	51	0	27	0	Pulapandan, P. I.	N. A.L., U.S. ports	Temp, sugar	7,800	6,251	4,700
Atlantic Maru	1	7	15	1	14	28	1	21	50	2	12	10	American	456	1	56	0	28	0	Cebu, P. I.	New York, N. Y.	Temp, general	8,044	8,313	5,700
Defiance	1	18	40	1	19	30	2	13	15	2	13	40	British	215	0	33	5	14	0	Champerico, Guat	Cristobal, C. Z.	General	2,365	2,270	735
Salvador	2	1	56	2	6	06	2	13	40	2	13	40	American	407	7	53	7	22	0	Portland, Ore	Portland, Mass	General	5,512	7,156	5,094
Dakotan	2	3	00	2	6	49	2	14	30	2	14	30	American	471	1	59	2	26	0	Portland, Ore	Boston, Mass	General	8,129	9,027	6,539
Paul	2	2	30	2	7	34	2	15	25	2	15	25	Norwegian	473	6	64	5	28	0	Curacao, D. W. I.	Curacao, D. W. I.	Gasoline	12,491	9,625	6,839
Langager	2	00	25	2	8	04	2	16	40	2	16	40	Colombian	116	0	21	1	10	0	Buenaventura, Col	Cristobal, C. Z.	General	247	211	124
Trevethoe	2	2	30	2	8	17	2	16	50	2	22	35	British	369	9	54	1	24	0	Vancouver, B. C.	Gibraltar	Wheat	7,215	5,179	3,928
Indian City	2	8	05	2	9	08	2	18	10	2	21	45	British	411	0	54	6	28	0	Vancouver, B. C.	Glasgow, Scotland	General	9,000	6,512	4,665
Cortona	2	17	15	2	18	07	3	10	50	3	10	50	British	414	4	55	7	27	0	Vancouver, B. C.	Glasgow, Scotland	General	5,743	7,424	5,398

° Motor ship.

* Tanker.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
May 31.....	Iriona.....	United Fruit Co.	Port Limon via Bocas.	May 31.....	No. 300-N ¹⁵	Pan American-Graace Airways	Pimental via wayports.
May 31.....	Rugia.....	Hamburg-American Line	Tampico via wayports.	May 31.....	Iriona.....	United Fruit Co.	New Orleans, La.
May 31.....	No. 144-M ¹⁵	Pan American-Graace Airways	Pimental via wayports.	May 31.....	No. 670-M ¹⁵	Pan American Airways	Miami via wayports.
May 31.....	No. 9664 ¹⁵	Pan American Airways	San Salvador via wayports.	June 1.....	Rugia.....	Hamburg-American Line	Cartagena, Colombia.
June 1.....	Darien C-35 ¹⁵	Seadair Airplane Co.	Barraququilla via wayports.	June 2.....	Inapaquina ¹⁶	A. Tagaropolos	Colon, Rep. of Panama.
June 2.....	Metapan.....	United Fruit Co.	Santa Marta, Colombia.	June 3.....	Anachucuna ¹⁶	Pan American Airways	Colon, Rep. of Panama.
June 2.....	Venezuela.....	Royal Netherlands S. S. Co.	Hamburg via wayports.	June 3.....	No. 669-M ¹⁵	Pan American Airways	Miami via wayports.
June 2.....	Teutonia.....	Hamburg-American Line	Hamburg via wayports.	June 3.....	Metapan.....	United Fruit Co.	New York via Kingston.
June 2.....	Inapaquina ¹⁶	A. Tagaropolos	Colon, Rep. of Panama.	June 3.....	Teutonia.....	Hamburg-American Line	Tampico via wayports.
June 2.....	Anachucuna ¹⁶	Pan American-Graace Airways	Colon, Rep. of Panama.	June 3.....	Venezuela.....	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.
June 2.....	No. 300-N ¹⁵	Pan American-Graace Airways	Pimental via wayports.	June 4.....	Carmelia ¹⁷	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
June 3.....	Cristobal.....	Panama R. R. S. S. Line	New York via Haiti.	June 4.....	Tela.....	United Fruit Co.	Port Limon via Bocas.
June 3.....	Tela.....	United Fruit Co.	New Orleans, La.	June 4.....	No. 144-M ¹⁵	Pan American-Graace Airways	Pimental via wayports.
June 3.....	Sixaola.....	United Fruit Co.	Port Limon via Kingston.	June 4.....	Sixaola.....	United Fruit Co.	Colonian ports.
June 3.....	Atlantian.....	Leyland S. S. Line	Liverpool via wayports.	June 4.....	Atlantian.....	Leyland S. S. Line	Barraququilla & wayports.
June 3.....	No. 668-M ¹⁵	Pan American Airways	Miami via wayports.	June 5.....	Darien C-35 ¹⁵	Seadair Airplane Co.	Colon, Rep. of Panama.
June 3.....	No. 9688 ¹⁵	Pan American Airways	San Salvador & wayports.	June 5.....	Amelia I. ¹⁶	P. W. Hamilton	Avonmouth via wayports.
June 3.....	Impero ¹⁷	Colon Import & Export Co.	Colon, Rep. of Panama.	June 5.....	Carare.....	Elders & Lyffes, Ltd.	New York via wayports.
June 4.....	Carmelia ¹⁷	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 5.....	Carare.....	United Fruit Co.	New York via Kingston.
June 4.....	Contessa.....	Standard Fruit & S. S. Co.	New Orleans via Habana.	June 5.....	Martinique.....	Colombian S. S. Line	New Orleans & wayports.
May 5.....	Toloca.....	United Fruit Co.	Port Limon, Costa Rica.	June 6.....	Contessa.....	Standard Fruit & S. S. Co.	New Orleans, La.
June 5.....	Venezuela.....	Royal Netherlands S. S. Co.	New York via Habana.	June 6.....	Tela.....	United Fruit Co.	Santo Domingo & wayports.
June 5.....	Martinique.....	Colombian S. S. Line	New York via wayports.	June 6.....	Tillie Lykes.....	Lykes Brothers S. S. Co.	Amsterdam & wayports.
June 5.....	Carare.....	Elders & Lyffes, Ltd.	Avonmouth via wayports.	June 6.....	Amelia I. ¹⁶	P. W. Hamilton	
June 5.....	Tillie Lykes.....	Lykes Brothers S. S. Co.	Houston, Tex.	June 6.....	Teutonia.....	United Fruit Co.	
June 5.....	Amelia I. ¹⁶	P. W. Hamilton	Colon, Rep. of Panama.				
June 6.....	Tela.....	United Fruit Co.	Port Limon, Costa Rica.				
June 6.....	No. 9670 ¹⁵	Pan American Airways	San Salvador & wayports.				
June 6.....	No. 670-M ¹⁵	Pan American Airways	Miami via wayports.				
June 6.....	No. 144-M ¹⁵	Pan American-Graace Airways	Pimental via wayports.				

¹⁵ Air mail carrier. ¹⁶ Motor boat. ¹⁷ Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 2.....	Analthus ¹	Texas Corporation	Los Angeles, Calif.	June 4.....	Analthus ¹	Texas Corporation	Los Angeles, Calif.
June 3.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.	June 4.....	Saramacca.....	United Fruit Co.	San Francisco, Calif.
June 5.....	Nueva Panama ¹⁸	Hans Elliott	Panama Bay, R. P.	June 5.....	Nueva Panama ¹⁸	Hans Elliott	Panama Bay, R. P.
June 5.....	Sambu ¹⁹	Hans Elliott	Panama Bay, R. P.	June 5.....	Sambu ¹⁹	Hans Elliott	Panama Bay, R. P.
June 5.....	Real ¹⁹	Hans Elliott	Panama Bay, R. P.	May 5.....	Real ¹⁹	Hans Elliott	Panama Bay, R. P.
June 5.....	A. B. Obarrío ¹⁹	A. Valdez	Panama Bay, R. P.	June 5.....	A. B. Obarrío ¹⁹	A. Valdez	Panama Bay, R. P.
June 5.....	Dos Hermanos ¹⁹	A. Valdez	Panama Bay, R. P.	June 5.....	Dos Hermanos ¹⁹	A. Valdez	Panama Bay, R. P.

¹ Tanker. ¹⁸ Motor ship. ¹⁹ Motor schooner.

* Other than ships passing through the Canal.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending June 6, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Rugia	Hamburg-American Line		June 1.		659
Benjamin Franklin	Fred Olsen S. S. Line		June 1.		618
El Salvador	Panama Mail S. S. Co.	June 1.	June 1.	189	263
Albert Vogler	Hamburg-American Line	June 1.	June 1.	99	88
Narenta	Royal Mail Steam Packet Co.	June 1.	June 1.	250	(²)
Defance	Roosevelt S. S. Co.	June 1.	June 2.	254	(²)
Metapan	United Fruit Co.	June 2.	June 3.	76	877
Teutonia	Hamburg-American Line	June 2.	June 3.	83	71
Venezuela	Royal Netherlands S. S. Co.	June 2.	June 3.	56	6
Salvador	Pacific Steam Navigation Co.	June 2.		294	
Caldas	National Navigation Co.	June 2.	June 5.	279	65
Kwanto Maru	Ossaka Shosen Kaisha	June 3.	June 3.	134	221
Este	North German Lloyd	June 3.	June 3.	3	(²)
Tela	United Fruit Co.	June 3.	June 3.	954	28
Atlantian	Leyland S. S. Line	June 3.	June 4.	338	(²)
Buenos Aires	Johnson S. S. Line	June 3.	June 4.	(²)	244
Annie Johnson	Johnson S. S. Line	June 3.	June 4.	41	77
Sixaola	United Fruit Co.	June 3.	June 4.	301	549
Cristobal	Panama R. R. S. S. Line	June 3.		3,671	
Heranger	Westfal, Larsen & Co.	June 4.	June 4.		18
Axel Johnson	Johnson S. S. Line	June 4.	June 4.	42	(²)
Manizales	Roland Line	June 4.		948	
Portland	Hamburg-American Line	June 4.	June 5.	158	104
Teno	Chilean S. S. Line	June 4.	June 5.	(²)	11
Carare	Elder & Fyffes, Ltd.	June 5.	June 5.	(²)	3
Cauca	National Navigation Co.	June 5.		298	
Tolosa	United Fruit Co.	June 5.	June 5.	248	232
Martinique	United Fruit Co.	June 5.	June 5.	30	337
Barneveld	Royal Netherlands S. S. Co.	June 5.	June 5.	32	(²)
Venezuela	Royal Netherlands S. S. Co.	June 5.	June 6.	2	489
Confessa	Standard Fruit & S. S. Co.	June 5.	June 6.	232	302
Santa Teresa	Grace Line	June 5.	June 6.	249	370
Tillie Lykes	Lykes Brothers	June 5.	June 6.	649	148
City of Panama	Panama Mail S. S. Co.	June 5.		998	
Cerigo	Hamburg-American Line		June 6.		258
Tela	United Fruit Co.	June 6.	June 6.	10	429

¹ No cargo discharged.² No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices to individuals and companies including the 25 per cent surcharge, effective June 8, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.105
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.16
Oakum, Navy, unspun	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.15

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Volume XXIV. Balboa Heights, C. Z., June 17, 1931. No. 46.

Cargo Through the Canal During May, 1931.

On pages 652 and 653 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in May, 1931. This cargo, segregated according to direction as compared with May, 1930, and the differences, are shown in the following tabulation:

	May, 1930.	May, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific.....	681,073	519,844	-161,229
Pacific to Atlantic.....	1,580,543	1,405,608	-174,935
Total.....	2,261,616	1,925,452	-336,164

It will be noted from the above that the Atlantic to Pacific tonnage decreased 161,229 tons (23.7 per cent) in comparison with May, 1930, and that from the Pacific to the Atlantic decreased 174,935 tons (11.1 per cent), making a total decrease of cargo in both directions of 336,164 tons (14.9 per cent).

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Sixty-seven and seven-tenths (67.7) per cent of the cargo from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States and 21.1 per cent in Europe, these two areas contributing almost 89 per cent of the total cargo moving in this direction in May, 1931. In comparison with May, 1930, tonnage from the United States declined 84,259 tons (19.3 per cent), and that from Europe decreased 50,892 tons (31.8 per cent). The percentage of the total originating in the United States was somewhat higher in the past month than in May, 1930, while the proportion of the total coming from Europe was lower.

Destination.—Forty-seven (47) per cent of the Pacific-bound cargo was destined to the United States; 23.3 per cent to Asia; 11.4 per cent to South America; and 7.6 per cent to Australasia. Tonnage to all these areas decreased in comparison with May, 1930, as follows: To the United States, 47,882 tons (16.4 per cent); to Asia, 33,115 tons (21.5 per cent); to South America, 57,560 tons (49.1 per cent); and to Australasia, 31,413 tons (44.4 per cent). The proportion of the total cargo destined to the United States showed an increase in May, 1931, in comparison with May, 1930. There was also a slight increase in the proportion of the total destined to Asiatic ports. The percentage of the total destined to South America and Australasia showed rather a severe decrease in comparison with May, 1930. The heavy decrease in tonnage destined to South America was due principally to reduced shipments from Europe, which registered a decrease of 57.2 per cent. In the United States to South America trade a decrease of 35.3 per cent occurred. The heavy decrease in the movement to Australasia

was accounted for principally by the curtailed shipments from United States and Canada.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.7 per cent came from the United States; 20.5 per cent from South America; 15.1 per cent from Canada; 9.7 per cent from Asia; and 5.8 per cent from Australasia. Cargo from Canada showed a proportionate as well as an actual increase in tonnage in comparison with May, 1930, as did that originating in Asia. The actual increase in tonnage from Canada amounted to 21,897 tons (11.5 per cent) and that from Asia, 8,101 tons (6.3 per cent). Cargo from the other areas mentioned, decreased in actual tonnage as follows: From the United States, 103,669 tons (13.6 per cent); from South America, 117,930 tons (29.1 per cent); and from Australasia, 3,290 tons (3.9 per cent). In relation to the total cargo tonnage the amounts coming from the United States and South America showed decreases while that from Australasia was slightly higher. Reduced iron ore and nitrate shipments from Chile accounted for the larger part of the decline in cargo tonnage from South America, and smaller shipments of mineral oils and lumber in the tonnage from the United States. Larger wheat shipments accounted for the heavier tonnage from Canada.

Destination.—Segregated according to destination, 56.3 per cent of the cargo tonnage moving from the Pacific to the Atlantic went to the United States and 35.7 per cent to Europe. Tonnage to the United States decreased 138,314 tons (14.9 per cent) in comparison with May, 1930, and that to Europe declined 44,888 tons (8.2 per cent). In their proportions to the total cargo, the tonnages to both the United States and Europe were slightly lower in May, 1931, than in May, 1930.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 89 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of May, 1931. The remaining 11 per cent consisted, for the most part, of manufactured articles in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for May, 1930, or May, 1931, are listed in the following tabulation, showing differences:

Commodity.	May, 1930.	May, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles	10,839	12,439	+1,600
Cement	33,959	18,812	-15,147
Coal and coke	3,787	12,373	+8,586
Cotton	6,904	15,385	+8,481
Manufactured goods:			
Iron and steel	154,153	109,617	-44,536
Machinery	10,999	9,054	-1,945
Railroad material	12,333	3,410	-8,923
Tinplate	28,173	21,492	-6,681
Miscellaneous	20,781	21,433	+652
Metal, scrap	22,052	1,473	-20,579
Oils, mineral	68,885	32,445	-36,440
Paper	20,335	15,307	-5,028
Phosphates	34,242	44,274	+10,032
Sugar	14,363	10,170	-4,193
Tobacco	8,880	14,303	+5,423

The above 15 commodity groups for May, 1931, comprise 65.8 per cent of the total cargo moving from the Atlantic to the Pacific. Six of the items showed increases and 9 decreases.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

It was possible to classify 98.8 per cent of all cargo moving from the Pacific to the Atlantic during the month of May, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930 are listed below:

Commodity.	May, 1930.	May, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Asphalt.....	11,263	398	-10,865
Barley.....	26,065	9,356	-16,709
Beans.....	5,628	20,578	+14,950
Canned goods (fish, fruit, vegetables, etc.).....	33,581	51,895	+18,314
Coffee.....	16,301	15,949	-352
Cold storage (food products) ¹	27,903	26,560	-1,343
Copra.....	2,994	16,403	+13,409
Cotton.....	10,028	8,392	-1,636
Flour.....	7,944	16,727	+8,783
Fruit, dried.....	12,079	11,658	-421
Fruit, fresh.....	7,724	29,255	+21,531
Lumber.....	295,964	218,585	-77,379
Metals, various.....	55,016	46,398	-8,618
Nitrates.....	103,329	71,040	-32,289
Oats.....	3,912	19,269	+15,357
Oil, coconut.....	15,058	4,877	-10,181
Oils, mineral.....	408,980	314,546	-94,434
Ores, principally iron.....	174,340	98,325	-76,015
Rice.....	9,404	12,340	+2,936
Sugar.....	114,916	123,574	+8,658
Wheat.....	113,039	157,084	+44,045
Wool.....	18,479	26,331	+7,852

¹ Does not include fresh fruit.

The above 22 commodity groups for May, 1931, comprise 92.5 per cent of the cargo moving from the Pacific to the Atlantic. Ten of the items showed increases and 12 decreases. The majority of the increases were in food products.

(Continued on next page.)

Supplement No. 21.—Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

THE PANAMA CANAL, EXECUTIVE OFFICE,
BALBOA HEIGHTS, C. Z., June 9, 1931.

The following additional regulations are hereby added to Chapter X, Exclusion of Chinese, of the Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.

H. BURGESS,
Governor.

(These Regulations should be inserted in Chapter X, page 46, of "Rules and Regulations Governing Navigation of the Panama Canal and Adjacent Waters.")

Regulation 138.1. The master of a vessel carrying Chinese as members of its crew shall have in his possession passports or other identification papers covering each Chinese seaman, giving the name of the seaman as shown on the articles, date and place of birth specifying the town or province, height, any distinguishing marks or characteristics, occupation and signature of the seaman in Chinese, also photograph and right thumb print of the seaman.

Regulation 138.2. Identification papers or passports of Chinese seamen shall be available for the inspection of the boarding officers upon the arrival of a vessel at a Canal Zone port and when such vessel remains in port 24 hours or more all Chinese identification papers shall be delivered to the Chief Customs Inspector for custody, to be returned to the master after his crew has been checked and found to be aboard prior to the sailing of the vessel.

Regulation 138.3. In the case of vessels arriving without proper passports or other identification papers for Chinese members of their crews, such Chinese seamen may be removed from such vessels and detained at the expense of the vessel in question in the local jail or quarantine station until such time as the vessel is ready to depart, or until the master has prepared and presented suitable identification papers covering the Chinese seamen.

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, May, 1931.—Continued from page 651.
(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.			ASIA.					Grand total.	Per cent of total cargo.			
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America.	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. ¹	Total, Asia.
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports.....	146,444	517	978	469	16,937	165,345	7,365	845	900	2,458	84	11,652	4,272	681		4,953	8,581	16,843	28,801	8,203	62,428	244,378	46.9
South Atlantic ports.....	7,342					7,342	112			6		118					120	1,294	2,333	703	4,450	11,910	2.3
Gulf ports.....	45,840	57		3,748	340	49,985	1,401	60	51	333	97	1,942					2,500	7,803	33,532		43,837	95,764	18.5
Total, United States.....	199,626	574	978	473	17,277	222,672	8,878	905	951	2,797	181	13,712	4,272	681		4,953	11,201	25,942	64,666	8,906	110,715	332,052	67.7
East Coast of Canada.....							10,592					1,295		1,248		2,543						2,543	0.5
East coast of Central America.....							5,549	1,460		697	473	4,543		2,565		2,565						13,157	2.5
Cristobal, C. Z. ²	1,372	344	143			5,549	1,460	756	1,157	697	473	4,543		2,565		2,565						10,092	1.9
West Indies.....	951	9,768				10,719																10,719	2.1
Total, North America.....	201,949	10,376	5,121	4,217	17,277	238,940	20,930	1,661	2,108	3,494	654	28,847	5,567	4,494		10,061	11,201	25,942	64,666	8,906	110,715	338,563	74.7
EUROPE:																							
British Isles.....	9,700	6,122				15,822	5,794	100	331	1,248		7,473		22,086	2,002	24,088						47,383	9.1
Belgium.....	8,610	3,746	197	106		12,659	4,729	101	408	777	185	6,200		2,834		2,834						21,693	4.2
Denmark.....	3		868			871	1,676					1,676										2,547	0.5
France.....	1,483	65	21			1,569	1,666		50	163	50	1,929										3,498	0.7
Germany.....	3,671	685	1,738			6,094	2,674	259	753	816	257	4,759										10,853	2.1
Holland.....	2,106	273		52		2,431	1,807	23	319	437	203	3,789										6,220	1.2
Italy.....	722	75	48			845	1,018			136		1,154										1,999	0.4
Norway and Sweden.....	2,354	7	695	2,339		5,305	1,954		200	500	50	2,704	2,331			2,331						10,430	2.0
Spain and Portugal.....	145	75	16			236	217			63		280										516	0.1
Europe ¹	2,080	313	955	10		3,358	291		89	44	319	743										4,101	0.8
Total, Europe.....	30,871	11,361	4,538	2,507		49,280	21,826	483	2,150	5,184	1,064	30,707	2,331	24,920	2,002	29,253						109,240	21.1
East coast of South America.....	11,352	359	14			11,725	5	100				105							2,420		2,420	14,250	2.7
Africa.....	4					4													7,787		7,787	7,791	1.5
Grand total.....	244,179	22,099	9,673	6,724	17,277	299,949	42,761	2,244	4,258	8,678	1,718	59,659	7,898	29,414	2,002	39,314	11,201	25,942	74,873	8,906	120,922	519,844	100.0
Per cent of total cargo:																							
May, 1931.....	47.0	4.2	1.9	1.3	3.3	57.7	8.2	0.4	0.8	1.7	0.3	11.4	1.5	5.7	0.4	7.6	2.2	5.0	14.4	1.7	23.3	100.0	.....
May, 1930.....	43.0	3.8	1.2	0.3	1.5	49.8	9.0	0.4	0.4	1.9	5.5	17.2	4.0	6.4	.....	10.4	1.4	4.0	11.8	5.4	22.6	100.0	.....
May, 1929.....	39.8	3.6	2.9	1.6	0.9	48.8	9.0	0.8	0.5	2.1	3.2	15.6	6.0	9.2	.....	15.2	2.0	6.1	10.3	1.5	20.4	100.0	.....

* General cargo not routed so as to allow segregation between definite ports.

† Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, May, 1931.

(Figures represent tons of 2,240 pounds.)

From—	North America.										Europe.										Grand total.	Per cent of total cargo.		
	UNITED STATES.					East coast of Cen- tral America.	Cristobal, C. Z.²	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe.¹	Total, Europe.			East coast of South America.	Egypt.
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.																			
NORTH AMERICA:																								
West coast of United States	465,317	4,223,222	984,492	524			1,226,299	829,523	579	78,965	2,096	272	2,368	18,503	6,868	438	5,205		15,118	129,833	2,752	656,164	46.7	
West coast of Canada	22,280		319	22,599	6,054		140	6,847	35,640	67,142	15,729	1,852	28,556	7,738	7,264	6,426	5,798		32,893	173,398	2,737	211,775	15.1	
W. coast Central America	153			153			5,938	4	6,095		14		123	1,938	20		761			2,856		8,951	0.6	
Bahian, C. Z.							66		66													66		
Hawaiian Islands	21,387		133	21,520				21,520		842										842		22,362	1.6	
Total, North America	509,137	4,223,23	436,536	796	6,054		7,370,36	680,586	900,146	949,17	839,2	124,31	28,179	14,152	6,864	11,764		48,011	306,929	5,489	899,318	64.0		
SOUTH AMERICA:																								
Chile	94,265	17,429	8,217	119,911			499	1,068	121,478	17,753	6,320	2,851	9,262	1,674	998	3,408	22	45,651	87,939	12	209,429	14.9		
Colombia	4,425		282	4,707			3,243	7,950		1	8			37	30				38		7,988	0.6		
Ecuador	9,010			9,010			3,008	12,018						37	366		55		459		12,477	0.9		
Peru	6,072			6,072	551		46	43,669	9,510	342	46	57	1,984	12	17			1,917	13,885	380	57,934	4.1		
W. coast South America ¹	70			70			40	3	113	33								3	36		149			
Total, South America	113,842	17,429	8,499	139,770	37,551		6,836	1,071	185,228	27,297	6,670	46	2,908	11,283	1,686	3,408	77	47,571	102,357	392	287,977	20.5		
AUSTRALASIA:																								
Australia	1,030			1,030	770			1,800	4,000				2,200		1,960			1,500	5,500		7,300	0.5		
New Zealand					346			346	57,252										61,412		61,758	4.4		
Australasia ¹									80				5,330					7,396	12,806		12,806	0.9		
Total, Australasia	1,030			1,030	1,116			2,146	61,332			7,530		1,960				8,896	79,718		81,864	5.8		
ASIA:																								
Philippine Islands	67,861		29,831	97,692			8	97,700													97,700	6.9		
China	7,083		244	7,327			1,009	169	9,105												9,105	0.7		
Japan	7,149			7,149			123	603	7,875												7,875	0.6		
Far East ¹	752			752				7,755	8,507			7,300						5,962	13,262		21,769	1.5		
Total, Asia	83,445		30,075	113,520			1,140	8,527	123,187			7,300						5,962	13,262		136,449	9.7		
Grand total	707,454	21,652	62,010	791,116	44,721		15,346	46,278	897,461	235,578	24,509	470	41,485	39,462	17,798	8,275	15,172	77,110	440,502	266,581	1,405,608	100.0		
Per cent of total cargo:																								
May, 1931	50.4	1.5	4.4	56.3	3.2		1.1	3.3	63.9	16.7	1.7	0.7	3.0	2.8	1.3	0.6	1.1	7.8	35.7	0.4	100.0			
May, 1930	53.6	1.8	3.5	58.9	2.5		1.2	1.3	63.9	16.2	0.7		2.5	2.3	1.4	0.7	0.5	9.6	34.6	0.1	100.0			
May, 1929	52.3	4.4	4.8	61.5	3.7	0.1	1.1	2.1	68.5	15.2	0.8		1.8	1.8	1.4	0.3	0.2	8.8	30.7	0.3	100.0			

¹ General cargo not routed so as to allow segregation between definite ports. ² Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 13, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Pacific	6	20 00	7	6 00	7	12 23	7	13 36	British.	Furness, Withy & Co.	435 0	60 3	18 7	Glasgow, Scotland	Vancouver, B. C.	General.	822	9,725	6,942
Ranger ¹	7	4 35	7	7 10	7	14 19	7	15 50	Yugoslav.	Jugoslav-Lloyd	403 0	52 0	13 0	Rotterdam, Holland	Chile.	Ballast.	5,926	4,189	
Steel	7	6 10	7	8 20	7	15 18	7	19 55	American.	Isthmian S. S. Lines	424 2	56 2	27 5	Baltimore, Md.	Singapore, Sr. Set.	General.	8,406	7,688	5,509
El Cervo ¹	7	11 35	7	11 45	7	18 20	7	19 30	British.	Anglo-Cenad. Oilfields.	407 4	52 2	19 4	Philadelphia, Pa.	La Libertad, Ecua.	Ballast.	6,046	4,326	
Lessebank ²	7	12 15	7	12 50	7	19 13	7	23 00	British.	Bank Line, Ltd.	436 7	57 4	26 0	Tampa, Fla.	Shanghai, China.	Phosph. te. cotton.	7,700	6,623	5,412
New York ¹	7	18 25	7	18 45	8	9 37	8	10 44	American.	The Texas Co.	416 8	56 0	18 0	Providence, R. I.	Los Angeles, Calif.	Ballast.	6,775	4,841	
Bessemer	7	20 55	8	6 10	8	13 30	8	14 45	American.	Isthmian S. S. Lines	424 0	56 0	21 6	Baltimore, Md.	Tacoma, Wash.	Steel, general.	5,370	7,611	5,450
S-11 ³	8	7 45	8	7 45	8	14 18	8	15 20	American.	U. S. Navy	231 0	21 0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
Sotia ⁴	8	7 45	8	7 45	8	14 18	8	15 20	American.	U. S. Navy	231 0	21 0		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
San Rafael	7	21 55	8	9 30	8	13 23	8	14 55	American.	Quaker Line	149 3	30 0		New York, N. Y.	Seattle, Wash.	General.	2,737	6,484	4,675
Lycan	8	6 30	8	9 50	8	16 49	8	18 05	American.	Alfred Holt & Co.	410 0	54 0	17 10	Philadelphia, Pa.	Shanghai, China.	Gen. lub. oil	3,446	7,817	5,506
Europa	8	8 35	8	10 55	8	17 11	8	18 43	British.	East Asiatic Co.	455 3	56 3	23 0	Copenhagen, Den.	Vancouver, B. C.	Passengers only.	11,256	8,275	
Nodava	8	13 40	8	15 45	8	22 38	9	00 04	British.	Donaldson Brothers.	387 0	53 7	17 0	Glasgow, Scotland	Vancouver, B. C.	General.	561	6,719	4,979
Nordstad ²	8	16 45	8	17 15	9	11 22	9	12 53	Norwegian.	Fern Line.	378 0	54 0	24 0	Port Tampa, Fla.	Yokohama, Japan.	(⁵)	7,046	6,079	4,534
Wiegand	8	10 35	9	6 05	9	13 35	9	15 00	German.	North German Lloyd	385 0	54 3	18 3	Hamburg, Germany	San Antonio, Chile	General.	1,444	6,573	4,629
Fisher	8	20 20	9	8 35	9	15 54	10	16 45	British.	J. P. Gerry	61 2	18 6	6 0	Belize, Honduras	Vancouver, B. C.	Ballast		75	58
Lusie L. ⁵	9	8 20	9	8 40	9	16 10	9	17 25	American.	Williams S. S. Line	415 0	56 0	19 0	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,713	7,717	5,763
Willbourn	9	11 20	9	11 50	9	19 34	9	20 30	American.	Amer.-Hawaiian Line	404 6	53 9	19 0	Boston, Mass.	Seattle, Wash.	General.	2,995	6,777	4,761
Wisconsin	9	3 45	9	13 05	9	20 02	9	21 11	French.	French Line	470 0	61 3	20 0	Antwerp, Belgium	Vancouver, B. C.	General.	10,459	7,110	
Kwansai	9	13 05	9	13 45	9	20 45	9	21 40	Japanese.	Osaka Shosen Kaisha.	461 0	61 0	21 11	Boston, Mass.	Hongkong, China.	Gen., tobacco	3,450	9,414	6,700
Maru ²	9	19 00	9	19 15	10	9 07	10	10 07	Danish.	Strang & Co.	385 0	54 0	16 0	Baltimore, Md.	Grays Har., Wash.	Ballast.	6,736	5,064	
Guldborg ²	9	23 25	10	6 15	10	14 22	10	16 45	American.	Nelson Line	321 7	50 0	16 4	Baltimore, Md.	Seattle, Wash.	General.	2,170	3,872	2,598
Castletown	9	23 25	10	6 15	10	14 22	10	16 45	American.	Nelson Line	321 7	50 0	16 4	Baltimore, Md.	Seattle, Wash.	General.	2,170	3,872	2,598
Dorothy	10	00 25	10	6 25	10	13 31	10	14 45	American.	Luckenbach Line.	448 9	60 2	24 6	Boston, Mass.	Seattle, Wash.	General.	5,800	9,294	6,861
Pacific	10	5 45	10	7 20	10	14 44	10	15 55	American.	Dimon S. S. Corp.	409 6	54 2	14 11	Philadelphia, Pa.	Seattle, Wash.	General.	2,031	6,537	4,845
Redwood	9	23 10	10	7 10	10	14 46	10	15 48	Chilean.	Chilean Government.	126 5	27 0	7 0	Greenock, England	Valparaiso, Chile.	Ballast.	383	78	
Galvarino ⁴	10	6 20	10	7 30	10	15 40	10	21 06	Danish.	W. Tankership Rhederei	520 0	70 0	21 9	Hamburg, Germany	Talara, Peru.	Ballast.	12,535	8,224	
Heinrich V.	2	11 15	10	8 55	10	16 47	10	18 05	British.	Pacific Steam Nav. Co.	215 0	33 5	15 8	Cristobal, C. Z.	Champerico, Guat.	General.	880	1,270	735
Riedemann ¹	10	9 10	10	9 20	10	16 51	10	17 55	American.	Royal Line	409 6	54 2	20 6	Philadelphia, Pa.	Seattle, Wash.	General.	3,915	6,621	4,891
Salvador	9	18 30	10	11 50	10	13 38	10	14 48	Dutch.	Motor schooner.	347 6	48 2	16 4	Hamburg, Germany	Corral, Chile.	General.	2,158		
Constance	9	18 30	10	11 50	10	13 38	10	14 48	Dutch.	Motor schooner.	347 6	48 2	16 4	Hamburg, Germany	Corral, Chile.	General.	2,158		
Chandler	9	18 30	10	11 50	10	13 38	10	14 48	Dutch.	Motor schooner.	347 6	48 2	16 4	Hamburg, Germany	Corral, Chile.	General.	2,158		
Orastes	9	18 30	10	11 50	10	13 38	10	14 48	Dutch.	Motor schooner.	347 6	48 2	16 4	Hamburg, Germany	Corral, Chile.	General.	2,158		

¹ Tanker.

² Motor ship.

³ Submarine.

⁴ Tug.

⁵ Motor schooner.

⁶ Phosphate, cotton, and general.

Indian ¹	10	13	15	10	13	20	10	20	12	10	21	00	Danish	Comyn & Sons	391	0	53	0	15	0	Stettin, Germany	Vancouver, B. C.	Ballast	6,172	4,356
Canca	5	11	35	10	14	30	10	20	52	10	23	30	Colombian	National Navigation Co.	107	0	63	0	7	6	Cristobal, C. Z.	Buenaventura, Col.	General	80	262
Oritia	10	13	20	11	6	10	11	13	48	11	15	05	British	Pacific Steam Nav. Co.	550	3	27	4	27	1	Liverpool, England	Talcahuano, Chile	General	2,498	16,844
Australia	10	14	40	11	6	10	11	13	57	11	13	40	British	East Asiatic Co.	410	0	55	0	19	3	Newcastle, Eng.	Vancouver, B. C.	General	4,339	7,031
Lautaro	10	14	50	11	7	15	11	14	50	11	15	50	Chilean	Pacific Steam Nav. Co.	399	0	52	0	23	10	Itali, England	Corral, Chile	General	5,772	6,759
Janquero	11	5	00	11	7	25	11	15	44	11	18	00	Chilean	Chilean Government	326	0	27	0	11	00	Greenock, England	Valparaiso, Chile	Ballast	393	78
Calagaiten	11	5	00	11	7	25	11	15	44	11	18	00	Chilean	Imperial Oil Co.	321	3	27	0	24	0	Montreal, Canada	Talara, Peru	Ballast	12,339	7,717
Langfletarn	11	6	40	11	8	25	11	16	38	11	16	35	British	F. Carriek & Co.	416	0	56	0	14	0	Newcastle, Eng.	Vancouver, B. C.	Ballast	6,671	4,881
Chr. Knudsen	11	11	05	11	11	13	11	18	19	11	19	30	Norwegian	Canadian Transp. Co.	381	2	54	7	22	0	Fort Tampa, Fla.	N. Westminster, B. C.	(?)	6,935	6,083
Onondaga	11	11	40	11	12	00	11	19	11	12	4	23	American	Ford Motor Co.	251	0	43	5	18	0	Chester, Pa.	Portland, Ore.	(?)	2,280	2,656
Knute Nelson	11	5	50	11	14	20	11	20	25	12	1	20	Norwegian	Fred Olsen & Co.	436	0	56	0	16	0	Gothenburg, Sweden	Vancouver, B. C.	Bananas	131	8,016
Jacob	11	14	50	11	15	00	11	21	10	11	22	10	American	Lukenbach Line	434	3	57	7	20	6	Houston, Tex.	Tacoma, Wash.	General	3,455	7,982
Lukenbach	4	19	30	11	15	20	11	22	06	11	23	18	German	Rockland Line	216	5	32	9	12	0	Cristobal, C. Z.	Buenaventura, Col.	General	300	1,132
Manizales	11	15	50	11	18	50	12	8	58	12	10	28	Japanese	Kokusai Kisen Kaisha	855	0	51	0	18	4	Newport News, Va.	Shanghai, China	Tobacco	1,831	5,919
Liverpool	11	11	10	12	6	20	12	13	11	12	20	45	American	Grace Line	466	0	64	0	24	6	New York, N. Y.	Talcahuano, Chile	General, bananas	1,792	10,087
Santa Barbara	12	5	20	12	6	22	12	13	22	12	13	36	American	Dollar Line	502	2	46	1	28	0	New York, N. Y.	San Francisco, Cal.	General	2,955	12,660
Pok	12	2	45	12	7	10	12	15	39	12	16	45	American	Swaine & Hoyt	324	0	62	0	20	0	Corpus Christi, Tex.	Seattle, Wash.	General	2,933	3,984
Point Bonita	12	6	00	12	7	30	12	14	58	12	16	00	British	Kerr S. Co.	351	0	61	0	20	0	New York, N. Y.	Panama, N. Y.	General	2,580	9,308
Silverpalm	10	20	35	12	8	38	12	15	54	12	17	05	British	United Fruit Co.	415	0	44	2	17	11	Cristobal, C. Z.	San Francisco, Cal.	General	3,496	2,141
San Mateo	12	15	55	13	6	10	13	13	28	13	14	40	Swedish	Ore S. S. Corp.	501	0	72	2	21	5	New York, N. Y.	Cruz Grande, Chile	Ballast	15,425	4,421
Svealand	12	23	50	13	6	25	13	13	53	13	15	15	American	Standard Transp. Co.	468	3	63	0	18	0	New York, N. Y.	Los Angeles, Calif.	Ballast	9,744	7,140
Dixie Arrow	13	1	30	13	7	20	13	14	51	13	16	20	Japanese	Nippon Yusen Kaisha	445	0	58	0	22	10	Houston, Tex.	Osaka, Japan	General, tobacco	6,751	7,972
Taketoyo Maru	13	6	15	13	7	30	13	14	58	13	16	20	American	Ishimizu S. S. Lines	395	0	55	0	18	0	Baltimore, Md.	Portland, Ore.	General	2,754	7,330
Enslay City	13	9	45	13	10	30	13	16	19	13	17	15	American	Amer-Hawaiian Line	439	0	53	0	18	5	Boston, Mass.	Portland, Ore.	General	3,056	6,756
Montanan	13	1	20	13	10	30	13	17	21	23	21	20	Italian	Nav. Libera-Fristina	430	0	55	0	19	4	Trieste, Italy	Vancouver, B. C.	General	1,647	7,789
Rialto	13	12	00	13	12	05	13	18	15	13	22	55	British	Andrew Weir & Co.	430	0	53	0	13	0	Pasages, Spain	Antofagasta, Chile	Ballast	7,007	5,022
Forstbank	13	12	00	13	12	05	13	18	15	13	22	55	British	Anglo-Saxon Pet. Co.	430	8	58	6	16	0	Hamburg, Germany	Los Angeles, Calif.	Ballast	6,669	4,317
John P.	13	12	30	13	12	50	13	19	28	13	23	30	Norwegian	Panama Mail S. S. Co.	296	0	45	0	17	3	Pto. Colombia, Col.	San Francisco, Cal.	Coffee, general	897	3,948
Pedersen	12	17	20	13	13	40	13	20	40	13	21	40	American	Automobile parts and steel.											
City of	12	17	20	13	13	40	13	20	40	13	21	40	American	7 Sulphur, phosphate, and general.											
Panama	12	17	20	13	13	40	13	20	40	13	21	40	American	8 Automobile parts and steel.											

* Tanker.

* Sulphur, phosphate, and general.

* Automobile parts and steel.

* Pacific to Atlantic.

Hanley	6	19	50	7	6	58	7	14	45	7	14	45	American	Hanley S. S. Co.	440	0	56	0	28	0	Longview, Wash.	Newark, N. J.	Lumber	9,597	8,310
Langsford	6	19	50	7	7	06	7	15	45	7	15	45	British	Earle, Stodt, Clayton	370	0	56	2	23	3	Vancouver, B. C.	Falmouth, Eng.	Wheat	7,050	5,195
Edgar F.	6	21	00	7	7	39	7	16	15	7	16	15	American	Lukenbach Line	425	0	57	3	26	0	Portland, Ore.	Mobile, Ala.	General	5,329	8,568
Lukenbach	7	1	20	7	7	55	7	16	50	7	16	50	American	Amer-Hawaiian Line	404	6	53	9	25	0	San Francisco, Cal.	Boston, Mass.	General	5,000	6,754
Oregonian	7	10	45	7	11	24	7	18	15	7	18	15	American	Williams S. S. Corp.	415	1	55	7	26	0	Seattle, Wash.	Baltimore, Md.	Lumber, general	7,336	7,731
Willapa	7	17	00	7	17	48	7	18	15	7	18	15	French	French Line	425	0	55	0	26	4	Corral, Chile	Le Havre, France	Lumber	8,285	6,982
Zenon	7	19	00	8	6	54	8	11	48	8	11	48	American	Nelson Line	324	0	46	0	24	0	Seattle, Wash.	Baltimore, Md.	General	4,000	3,984
Fort Armstrong	7	22	20	8	7	11	8	15	25	8	15	25	British	Common Brothers	397	4	54	0	25	0	Vancouver, B. C.	Rotterdam, Holland	Lumber, general	8,421	5,843
Holystone	8	4	30	8	7	10	8	15	25	8	15	25	American	Grace Line	433	3	53	0	25	0	San Antonio, Chile	New York, N. Y.	Grain	4,415	11,680
Santa Clara	8	7	45	8	8	44	8	15	50	8	15	50	British	Lyle Shipping Co.	405	3	53	5	25	0	N. Westminster, B. C.	Middlesbrough, Eng.	Lumber, general	7,450	5,741
Cape Cornwall	8	7	45	8	8	44	8	15	50	8	15	50	British	Dutton Lumber Corp.	409	8	54	2	25	0	Everett, Wash.	Poughkeepsie, N. Y.	Lumber	7,300	6,581
Herman F.	8	8	00	8	8	00	8	16	30	8	16	30	American	Dutton Lumber Corp.	409	8	54	2	25	0	Everett, Wash.	Poughkeepsie, N. Y.	Lumber	7,300	6,581
Whiton	8	8	00	8	8	00	8	16	30	8	16	30	American	Dutton Lumber Corp.	409	8	54	2	25	0	Everett, Wash.	Poughkeepsie, N. Y.	Lumber	7,300	6,581

For orders.

* For orders.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	N. et.
California	8	12 05	9	6 10	9	13 45	9	14 10	American	Panama-Pacific Line	574.4	80.3	29.0	San Francisco, Cal.	New York, N. Y.	General	6,504	24,508	17,565
El Lobo	8	21 30	9	6 33	9	14 50	9	15 45	British	Chem. & Refin. Products	385.2	51.0	24.0	La Libertad, Ecua.	Pt. de Bona, Can. I.	Crude oil	5,984	4,851	3,326
Harry	9	5 00	9	7 20	9	15 55	9	15 55	American	Luckenbach Line	448.9	60.2	31.0	Seattle, Wash.	Boston, Mass.	Lumber, general	8,318	9,262	6,853
Luckenbach	9	6 50	9	8 03	9	17 00	9	17 55	British	Isbrandtsen Moller Co	418.9	54.7	25.3	Iloilo, P. I.	New York, N. Y.	General	7,484	7,410	5,523
Tiel Maersk	9	10 25	9	11 06	9	18 30	9	22 15	British	Hain S. S. Co.	400.2	52.1	23.0	Vancouver, B. C.	Greece	Wheat	7,254	5,767	4,319
Nelma	9	10 25	9	13 26	9	20 30	9	22 15	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
S-15	9	13 55	9	13 46	9	21 45	9	22 15	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Temple Pier	9	13 55	9	15 54	9	23 10	9	20 35	British	Temple S. S. Corp.	390.0	53.0	22.0	Salaverry, Peru	Liverpool, England	Sugar	7,600	5,725	4,165
Vernar	9	14 30	9	15 25	9	23 25	9	20 35	American	Calmor S. S. Corp.	410.5	54.2	24.0	Portland, Oreg.	Philadelphia, Pa.	Lumber	7,200	6,585	4,791
Ecuador	9	22 45	10	6 20	10	13 05	10	13 05	American	Panama Mail S. S. Co.	380.6	48.7	20.1	San Francisco, Cal.	New York, N. Y.	General	3,287	5,928	4,178
Aconagua	9	22 45	10	6 32	10	13 55	10	15 55	Chilean	So. American S. S. Co.	422.8	56.2	23.0	Valparaiso, Chile	New York, N. Y.	General	1,171	7,764	4,705
Lake Ormat	9	18 55	10	7 18	10	15 45	10	15 45	American	Fort Motor Co.	275.8	43.8	20.0	Cosco Bay, Oreg.	Brooklyn, N. Y.	General	2,500	2,758	1,741
Indra	10	4 00	10	8 16	10	17 30	10	20 45	Norwegian	Knut Knutsen	375.0	51.3	22.0	Corral, Chile	Stockholm, Sweden	General	6,254	5,456	3,797
Colombia	10	10 30	10	11 40	10	19 00	10	20 40	Danish	Orion S. S. Co.	375.0	52.8	27.0	Kolschubing, Siam	Nuevitas, Cuba	Rice	8,530		
San Marco	10	8 50	10	14 12	10	20 35	12	8 38	American	United Fruit Co.	315.2	44.2	20.8	San Francisco, Cal.	Cristobal, C. Z.	General	970	3,496	2,141
Adolf von	10	13 30	10	14 19	10	21 50	11	1 10	German	Hamburg-American Line	409.1	53.1	22.0	San Vicente, Chile	Hamburg, Germany	General	6,071	7,173	5,504
Bayer	11	1 30	11	6 05	11	13 50	11	16 45	British	Eagle Oil Shipping Co.	407.1	52.2	26.6	Pt. San Luis, Calif.	Lizards, Eng.	Gasoline	6,791	6,239	4,550
San Roberto	11	2 10	11	6 57	11	13 05	11	23 45	German	Hamburg-American Line	451.3	59.9	25.0	Vancouver, B. C.	Hamburg, Germany	General	7,321	8,510	6,387
Pastland	11	5 00	11	7 29	11	16 30	11	18 40	Norwegian	Anglo-Saxon Pet. Co.	469.6	59.2	25.0	Los Angeles, Calif.	Lands End, Eng.	Kerosene	10,762	8,318	5,076
Mahlin	11	21 00	11	7 48	11	15 40	12	12 15	British	Lady Anne Hen ta Yule	312.0	36.0	14.0	Los Angeles, Calif.	England	Ballast	1,491	851	
Port Hunter	11	6 10	11	8 23	11	18 15	11	18 15	British	Com. th & Dom. Line	481.2	62.3	25.0	Auckland, N. Z.	London, England	General	5,941	11,170	8,208
Kinderdyk	11	7 30	11	8 55	11	19 25	12	00 10	Dutch	Holland-America Line	469.4	58.3	27.0	Victoria, B. C.	Rotterdam, Holland	General	9,683	8,515	6,060
S-16	11	7 30	11	9 25	11	19 35	11	20 10	American	U. S. Navy	231.0	20.0		Balboa, C. Z.	Cristobal, C. Z.				
Clearton	11	10 45	11	11 21	11	20 10	11	20 10	British	R. Chapman & Son	400.0	52.3	26.0	Vancouver, B. C.	London, England	General	7,537	5,710	4,164
Durazzo	11	11 30	11	12 37	11	19 55	11	20 10	German	Hamburg-American Line	227.5	34.4	12.0	Guanayacu, Peruvian	Cristobal, C. Z.	General	7,436	1,682	1,041
Pacific Cedar	11	5 37	11	14 38	11	22 25	12	16 15	American	Dimon S. S. Corp.	400.0	54.7	25.2	Bellingham, Wash.	New York, N. Y.	Lumber, general	7,500	6,138	4,353
Amerikaland	11	3 00	11	16 54	12	13 05	12	13 05	Swedish	Ore S. S. Corp.	561.0	72.0	33.5	Cruz Grande, Chile	Baltimore, Md.	Iron ore	21,650	15,560	4,496
M. F. Elliott	12	3 00	12	6 09	12	13 45	12	13 45	American	Shell Petroleum Corp.	483.0	57.2	26.0	Los Angeles, Calif.	Fall River, Mass.	Gasoline	9,419	7,481	4,946
Wyoming	12	3 00	12	6 40	12	14 35	13	1 53	French	Shell Petroleum Corp.	483.0	57.2	26.0	Vancouver, B. C.	Le Havre, France	General	7,253	10,440	7,027
Colonial	12	4 30	12	7 50	12	15 10	12	15 10	British	T. & J. Harrison	396.0	52.6	23.0	N.W. West, B. C.	Liverpool, England	General	6,899	5,753	3,893
Barat	12	10 00	12	10 36	12	17 30	14	8 30	Dutch	Royal Neth. S. S. Co.	202.9	33.1	12.9	Buenaventura, Col.	Cristobal, C. Z.		420	1,182	742
Remora	11	21 30	12	12 45	12	19 20	12	19 20	British	N. M. Shipping Co.	415.0	62.3	24.8	Auckland, N. Z.	Southampton, Eng.	Frozen, general	4,479	11,911	8,945
Caldas	12	19 30	12	15 01	13	11 35	13	15 50	Colombian	Com. Nac. de Navig.	185.0	21.1	10.4	Buenaventura, Col.	Cristobal, C. Z.	General	239	211	124
Gallie L. D.	12	19 30	12	16 07	13	11 35	13	15 50	British	White Star Line	450.0	58.5	26.8	Lyttleton, N. Z.	London, England	Frozen, general	3,441	8,279	5,404
Emilie L. D.	12	21 15	13	6 07	13	13 45	13	15 35	French	Louis Dreyfus & Co.	400.0	52.9	26.8	Val de Vek, U.S.R.	Avonmouth, Eng.	Soy beans	7,958	6,512	4,724
Point Arena	12	23 09	13	6 47	13	14 50	13	14 50	American	Swayne & Hoyt	324.0	46.2	23.0	Portland, Oreg.	New Orleans, La.	(17)	3,665	3,984	2,612

Lumber, copper, lead, and asphalt.

Lumber and automobile parts.

Yacht.

Wheat, flour, and general.

Shoemaking.

Motor ship.

Coffee, cacao, and tagua.

Tanker.

West Mahwah.....	13	3.30	13	7.20	13	16.00	13	16.00	American.....	Pac-Arg-Brazil Line.....	410.0	54.0	25.0	Seattle, Wash.....	Santa Fe, Arg.....	7.200	6.588	5.049
Texas.....	13	6.27	13	8.00	13	17.05	13	17.05	American.....	Amer-Hawaiian Line.....	471.0	57.2	27.0	Seattle, Wash.....	Roston, Mass.....	8.705	6.588	5.049
Sljested ²⁰	13	6.55	13	8.20	13	17.35	13	17.35	Norwegian.....	Fern Line.....	376.5	53.8	25.0	Darien, Manchuria.....	Stettin, Germany.....	7.124	6.204	4.706
Sagadahoc.....	13	9.25	13	10.15	13	18.15	13	18.15	American.....	Argonaut S. S. Co.....	420.5	54.2	26.0	Seattle, Wash.....	New York, N. Y.....	7.200	7.346	5.357
Hawaiian.....	13	16.40	13	17.28	14	11.05	14	12.05	American.....	Amer-Hawaiian Line.....	404.6	53.9	25.0	Astoria, Oreg.....	Boston, Mass.....	4.443	6.766	4.767

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.										* DEPARTURES.									
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—			Date.	Vessel.	Line.	For—						
June 8.....	Cuba.....	French Line.....	Havre via wayports.	June 7.....	No. 9688 ¹⁸	Pan American Airways.....	San Salvador and wayp'ts.			June 7.....	No. 9688 ¹⁸	Pan American Airways.....	San Salvador and wayp'ts.						
June 8.....	Darien C-35 ¹⁸	Standard Fruit & S. S. Co.....	Barranquilla and wayp'ts.	June 7.....	No. 300-N ¹⁸	Pan American Airways.....	Pimental via wayports.			June 7.....	No. 300-N ¹⁸	Pan American Airways.....	Pimental via wayports.						
June 8.....	Pearl Marie ¹⁹	G. I. Bryan.....	Colon, Rep. of Panama.	June 7.....	Cristobal ¹⁸	Pan American Airways.....	Colon, Rep. of Panama.			June 7.....	Cristobal ¹⁸	Pan American Airways.....	Colon, Rep. of Panama.						
June 9.....	Orinoco.....	Hamburg-American Line.....	Hamburg via wayports.	June 7.....	Pearl Marie ¹⁹	G. I. Bryan.....	New York via Haiti.			June 7.....	Pearl Marie ¹⁹	G. I. Bryan.....	New York via Haiti.						
June 9.....	Strala.....	United Fruit Co.....	Santa Maria, Colombia.	June 8.....	Orinoco.....	Hamburg-American Line.....	Bluefields, Nicaragua.			June 8.....	Orinoco.....	Hamburg-American Line.....	Bluefields, Nicaragua.						
June 9.....	No. 300-N ¹⁸	Pan American Airways.....	Pimental via wayports.	June 9.....	Orinoco.....	Hamburg-American Line.....	Port Limon, Costa Rica.			June 9.....	Orinoco.....	Hamburg-American Line.....	Port Limon, Costa Rica.						
June 9.....	Esfuerzo ¹⁹	J. Asmusen.....	Colon, Rep. of Panama.	June 9.....	No. 670-M ¹⁸	Pan American Airways.....	Miami via wayports.			June 9.....	No. 670-M ¹⁸	Pan American Airways.....	Miami via wayports.						
June 9.....	Imapacuna ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.	June 10.....	No. 9670 ¹⁸	Pan American Airways.....	Colon, Rep. of Panama.			June 10.....	No. 9670 ¹⁸	Pan American Airways.....	Colon, Rep. of Panama.						
June 9.....	Andhuca ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.	June 10.....	Andhuca ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.			June 10.....	Andhuca ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.						
June 10.....	Zacapa.....	United Fruit Co.....	New York via Kingston.	June 10.....	Imapacuna ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.			June 10.....	Imapacuna ²⁰	A. Tagaropolos.....	Colon, Rep. of Panama.						
June 10.....	Viona.....	United Fruit Co.....	New Orleans, La.	June 10.....	Esfuerzo ¹⁹	J. Asmusen.....	Colon, Rep. of Panama.			June 10.....	Esfuerzo ¹⁹	J. Asmusen.....	Colon, Rep. of Panama.						
June 10.....	No. 9685 ¹⁸	Pan American Airways.....	San Salvador and wayp'ts.	June 10.....	Sixto ¹⁹	United Fruit Co.....	New York via wayports.			June 10.....	Sixto ¹⁹	United Fruit Co.....	New York via wayports.						
June 10.....	No. 608-M ¹⁸	Pan American Airways.....	Miami via wayports.	June 10.....	Cuba.....	United Fruit Co.....	Havre via wayports.			June 10.....	Cuba.....	United Fruit Co.....	Havre via wayports.						
June 11.....	Bridge town.....	Pan American Airways.....	Colon, Rep. of Panama.	June 11.....	Zacapa.....	United Fruit Co.....	Colon, Rep. of Panama.			June 11.....	Zacapa.....	United Fruit Co.....	Colon, Rep. of Panama.						
June 12.....	Uba.....	Colombian S. S. Line.....	New York via wayports.	June 11.....	Orinoco.....	Hamburg-American Line.....	Colon, Rep. of Panama.			June 11.....	Orinoco.....	Hamburg-American Line.....	Colon, Rep. of Panama.						
June 12.....	Amnetta I. ²⁰	Standard Fruit & S. S. Co.....	New Orleans and Habana.	June 11.....	No. 144-M ¹⁸	Pan American Airways.....	Port Limon via Boacas.			June 11.....	No. 144-M ¹⁸	Pan American Airways.....	Port Limon via Boacas.						
June 12.....	Carmelia ¹⁹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.	June 12.....	Darien C-35 ¹⁸	Standard Fruit & S. S. Co.....	Barranquilla and wayp'ts.			June 12.....	Darien C-35 ¹⁸	Standard Fruit & S. S. Co.....	Barranquilla and wayp'ts.						
June 12.....	Orinoco.....	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.	June 12.....	Carmelia ¹⁹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.			June 12.....	Carmelia ¹⁹	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.						
June 13.....	Esfuerzo ¹⁹	Hamburg-American Line.....	Port Limon, Costa Rica.	June 12.....	Bridge town.....	Colombian S. S. Line.....	New York via Kingston.			June 12.....	Bridge town.....	Colombian S. S. Line.....	New York via Kingston.						
June 13.....	Imapacuna ²⁰	J. Asmusen.....	Colon, Rep. of Panama.	June 12.....	Uba.....	Colombian S. S. Line.....	Colon, Rep. of Panama.			June 12.....	Uba.....	Colombian S. S. Line.....	Colon, Rep. of Panama.						
June 13.....	Royal Netherlands S. S. Co.....	United Fruit Co.....	Port Limon, Costa Rica.	June 13.....	Amnetta I. ²⁰	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.			June 13.....	Amnetta I. ²⁰	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.						
June 13.....	Coslarica.....	Royal Netherlands S. S. Co.....	Hamburg via wayports.	June 13.....	Cefalu.....	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.			June 13.....	Cefalu.....	Standard Fruit & S. S. Co.....	Colon, Rep. of Panama.						
June 13.....	No. 144-M ¹⁸	Pan American Airways.....	Pimental via wayports.	June 13.....	Impeco ¹⁹	Standard Fruit & S. S. Co.....	New Orleans and wayp'ts.			June 13.....	Impeco ¹⁹	Standard Fruit & S. S. Co.....	New Orleans and wayp'ts.						
June 13.....	No. 609-M ¹⁸	Pan American Airways.....	Miami via wayports.	June 13.....	Esfuerzo ¹⁹	J. Asmusen.....	Colon, Rep. of Panama.			June 13.....	Esfuerzo ¹⁹	J. Asmusen.....	Colon, Rep. of Panama.						
June 13.....	No. 9688 ¹⁸	Pan American Airways.....	San Salvador and wayp'ts.	June 13.....	Orinoco.....	Hamburg-American Line.....	Bluefields, Nicaragua.			June 13.....	Orinoco.....	Hamburg-American Line.....	Bluefields, Nicaragua.						

¹⁸ Air mail carrier. ¹⁹ Motor schooner. ²⁰ Motor boat.

PORT OF BALBOA.

June 8.....	Nora ¹	Arrow Oil Co.....	Los Angeles, Calif.	June 9.....	Nora ¹	Arrow Oil Co.....	Los Angeles, Calif.
June 10.....	Bokuyo Maru.....	Nippon Yusen Kaisha.....	Hongkong, China.	June 10.....	Bokuyo Maru.....	Nippon Yusen Kaisha.....	Hongkong, China.
June 10.....	Real ²¹	Hans Elliott.....	Panama Bay, R. P.	June 11.....	Real ²¹	Hans Elliott.....	Panama Bay, R. P.

¹ Tanker. ²¹ Motor schooner.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in May, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of May, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for May, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	66	341,482	257,633	417,647	257,591	\$298,363.03	178,238
Europe to Canada:							
Belgian.....	1	7,044	4,567	7,217	4,398	5,708.75	2,443
British.....	15	77,469	56,669	87,228	54,064	59,104.83	10,768
Danish.....	3	19,241	14,625	23,208	14,745	15,421.41	7,442
Dutch.....	1	8,351	6,201	10,155	6,337	7,751.25	3,801
French.....	1	7,592	4,635	8,379	5,031	5,793.75	1,512
German.....	3	20,829	13,854	23,411	14,176	17,317.50	8,139
Italian.....	2	11,803	8,773	14,606	9,175	10,966.25	2,254
Norwegian.....	3	16,196	10,712	17,465	10,814	13,379.84	7,661
Swedish.....	1	5,533	3,430	5,554	4,225	4,287.50	2,969
Total.....	30	174,058	123,466	197,223	122,965	139,731.08	46,989
United States to Far East:							
British.....	5	29,638	17,776	30,645	17,798	22,220.00	20,870
Danish.....	1	2,066	1,671	2,779	1,725	2,088.75	2,140
Japanese.....	6	34,031	28,448	43,650	27,953	35,357.55	40,358
Norwegian.....	2	8,487	4,982	8,635	4,944	6,227.50	13,518
Swedish.....	1	5,148	2,765	4,721	3,546	3,456.25	5,763
United States.....	4	27,166	20,142	33,071	20,103	25,177.50	22,709
Total.....	19	106,536	75,784	123,501	76,069	94,527.55	105,358
Europe to South America:							
Belgian.....	1	4,792	4,142	6,512	4,038	3,450.24	.....
British.....	3	21,473	15,755	26,700	16,556	19,693.75	8,039
Chilean.....	1	78	32	361	122	40.00	.....
Dutch.....	3	15,023	8,712	14,536	8,598	10,890.00	5,726
French.....	1	5,563	4,282	6,863	4,287	5,352.50	2,646
German.....	4	16,518	10,715	17,451	10,458	13,393.75	8,198
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	1,713
Norwegian.....	1	3,965	2,637	4,436	2,644	3,296.25	4,214
Total.....	15	76,741	51,451	88,577	53,453	62,586.49	30,536
Cristobal to South America:							
Colombian.....	5	731	712	1,113	716	862.10	782
Dutch.....	2	1,484	588	1,560	646	735.00	271
German.....	5	4,189	2,978	5,370	2,950	3,597.50	787
Total.....	12	6,404	4,278	8,043	4,312	5,194.60	1,840
United States to South America:							
British.....	2	8,281	6,849	11,050	6,855	7,042.22	1,197
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,999
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	.....
United States.....	8	33,454	24,523	44,274	24,474	28,380.25	12,876
Total.....	13	55,357	42,324	93,310	44,067	46,175.21	16,072
Europe to United States:							
British.....	4	19,600	13,198	21,359	13,074	14,046.21	.....
Danish.....	1	3,651	2,468	4,150	2,506	3,085.00	2,544
Norwegian.....	4	21,722	16,735	27,847	16,550	15,591.75	.....
Total.....	9	44,973	32,401	53,356	32,130	32,722.96	2,544
Europe to Australasia:							
British.....	8	61,764	44,036	72,453	44,485	53,412.24	32,730
Swedish.....	1	5,346	3,468	5,788	4,300	4,335.00	2,331
Total.....	9	67,110	47,504	78,241	48,785	57,747.24	35,061

* Includes Merchant Marine training vessel of 1,058 displacement tons.

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Foreign vessels without cargo, United States inter- coastal:							
British.....	2	9,002	7,508	12,353	7,523	\$6,481.44	.....
Danish.....	2	9,447	5,452	9,085	5,531	6,801.84	.....
German.....	1	4,340	3,762	6,370	3,658	3,124.80	.....
Norwegian.....	1	5,036	2,799	4,665	2,794	3,498.75	.....
Total.....	6	27,825	19,521	32,473	19,506	19,906.83	.....
United States to Canada:							
British.....	2	9,152	7,196	11,423	7,189	6,589.44	.....
Norwegian.....	1	4,284	2,507	4,333	2,494	3,084.48	.....
United States.....	2	10,687	7,314	11,883	7,299	9,142.50	11,972
Total.....	5	24,123	17,017	27,639	16,982	18,816.42	11,972
South America to United States:							
United States.....	4	17,624	12,374	19,744	12,298	15,467.50	8,177
United States to Philippine Islands:							
British.....	1	6,401	3,478	6,625	3,834	4,347.50	2,793
Norwegian.....	1	6,829	3,654	7,019	3,868	4,567.50	3,637
United States.....	1	6,525	4,832	7,621	4,832	6,040.00	8,431
Total.....	3	19,755	11,964	21,265	12,534	14,955.00	14,861
Cristobal to United States:							
United States.....	3	6,237	5,146	8,486	5,114	5,746.88	801
West Indies to Canada:							
British.....	2	5,008	4,034	6,582	4,032	7,792.50	6,003
Danish.....	1	4,558	2,734	4,553	2,785	3,417.50	3,750
Total.....	3	9,566	6,768	11,135	6,817	11,210.00	9,753
United States to Hawaii:							
United States.....	2	10,433	7,699	12,382	7,667	9,623.75	13,319
Canada to South America:							
British.....	2	17,602	15,241	28,377	15,913	12,673.44	.....
Central America to South America:							
British.....	1	4,546	3,916	6,233	3,948	4,895.00	8,392
Norwegian.....	1	1,676	928	1,733	968	1,160.00	2,200
Total.....	2	6,222	4,844	7,966	4,916	6,055.00	10,592
Cristobal to Central America:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,021
Cristobal to Balboa:							
Panamanian.....	2	44	48	90	58	36.00	.....
Around the world:							
United States.....	2	17,702	12,461	21,030	12,428	15,576.25	6,820
United States to Balboa:							
United States.....	1	4,844	3,966	6,391	3,945	4,957.50	3,748
United States to Australasia:							
United States.....	1	5,241	3,748	5,881	3,663	4,685.00	1,800
Canada to United States:							
British.....	1	4,235	3,452	5,767	3,423	3,049.20	.....
Canada to Australasia:							
British.....	1	5,518	4,419	7,178	4,413	5,523.75	2,543
South America to Canada:							
Norwegian.....	1	5,246	2,949	4,883	2,999	3,686.25	4,033
South America to Far East:							
Japanese.....	1	5,821	4,170	7,267	4,387	5,212.50	3,744
Europe to Central America:							
German.....	1	3,370	2,515	4,159	2,535	3,143.75	2,235
Africa to United States:							
Swedish.....	1	7,123	5,848	9,749	7,511	5,128.56	.....
Africa to South America:							
Belgian.....	1	3,326	2,872	4,800	2,949	2,394.72	.....
Africa to Far East:							
British.....	1	5,407	2,902	4,747	2,882	3,627.50	7,787
Grand total, May, 1931.....	219	1,081,366	786,051	1,313,605	793,616	910,131.46	519,844
Grand total, May, 1930.....	234	1,210,174	906,086	1,506,197	913,745	1,032,268.60	681,073
Grand total, May, 1929.....	278	1,329,095	1,041,384	1,668,713	1,014,479	1,164,303.77	920,360

* Includes naval vessel of 5,500 displacement tons.

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	64	351,498	267,776	432,921	268,643	\$334,648.50	483,108
Canada to Europe:							
Belgian.....	1	6,292	4,986	7,816	5,758	6,232.50	10,098
British.....	18	91,026	67,153	109,298	67,127	83,941.25	150,029
Dutch.....	1	7,619	5,782	9,338	5,808	7,227.50	10,241
French.....	1	7,475	4,380	7,817	4,667	5,475.00	7,423
German.....	3	21,346	14,245	24,047	14,686	17,806.25	26,063
Italian.....	1	9,856	7,927	12,951	8,025	9,998.75	9,523
Norwegian.....	3	17,401	11,676	19,170	11,928	14,595.00	23,242
Swedish.....	1	5,337	2,861	5,210	3,747	3,576.25	5,782
United States.....	1	5,450	3,465	5,687	3,450	4,331.25	7,754
Total.....	30	171,802	122,475	201,334	125,196	153,093.75	250,155
South America to United States:							
British.....	2	8,438	7,247	11,468	7,235	9,058.75	15,975
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	2,901
Danish.....	1	4,569	2,709	4,472	2,732	3,386.25	7,960
Swedish.....	2	8,917	7,486	30,676	8,762	9,357.50	43,796
United States.....	10	41,365	30,398	55,960	30,346	37,606.15	70,519
Total.....	16	67,961	51,273	109,886	53,051	63,699.90	141,151
Philippine Islands to United States:							
Japanese.....	6	29,711	25,953	37,731	25,462	31,929.90	44,979
Norwegian.....	2	8,291	4,895	8,282	4,849	6,118.75	13,713
Panamanian.....	1	6,955	3,659	6,856	3,659	4,573.75	6,741
United States.....	7	55,652	43,731	71,537	43,507	54,663.75	50,404
Total.....	16	100,609	78,238	124,406	77,477	97,286.15	115,837
South America to Europe:							
British.....	3	26,044	19,941	35,756	21,958	24,926.25	20,468
Dutch.....	2	9,678	5,421	9,230	5,627	6,776.25	13,083
French.....	1	4,936	3,385	5,751	3,555	4,231.25	8,440
German.....	7	35,365	24,900	41,224	24,917	31,125.00	53,282
Italian.....	1	7,516	5,514	12,003	6,058	6,892.50	1,448
Norwegian.....	1	5,001	2,753	5,494	4,744	3,441.25	6,924
Total.....	15	88,540	61,914	109,458	66,859	77,392.50	103,645
Australasia to Europe:							
British.....	11	91,247	64,044	106,034	65,911	80,055.00	67,258
French.....	1	3,681	3,096	5,112	3,079	3,870.00	5,330
Swedish.....	1	4,536	2,748	4,521	3,424	3,435.00	7,476
Total.....	13	99,464	69,888	115,667	72,414	87,360.00	80,064
South America to Cristobal:							
Colombian.....	4	570	550	880	550	678.20	621
Dutch.....	2	1,484	588	1,560	846	735.00	1,255
German.....	5	4,502	2,766	5,447	2,856	3,457.50	3,754
Total.....	11	6,556	3,904	7,887	4,252	4,870.70	5,630
United States to Europe:							
British.....	1	4,235	3,452	5,767	3,423	4,315.00	7,600
Danish.....	1	5,303	4,223	6,637	4,223	5,278.75	9,227
Norwegian.....	4	19,976	16,880	27,742	16,695	21,100.00	35,285
Total.....	6	29,514	24,555	40,146	24,341	30,693.75	52,112
Canada to United States:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	7,150
United States.....	4	19,181	13,984	22,339	13,898	17,480.00	24,421
Total.....	5	24,245	16,734	27,071	16,763	20,917.50	31,571
United States to Cristobal:							
United States.....	3	7,061	6,070	9,816	6,024	7,587.50	2,183
Hawaii to United States:							
United States.....	3	12,131	8,886	14,798	8,817	11,107.50	20,330
Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,394
United States.....	1	1,549	1,167	1,974	1,161	1,458.75	881
Total.....	3	2,990	2,453	4,272	2,465	3,066.25	2,275
Balboa to Cristobal:							
Panamanian.....	3	75	76	131	84	78.72	66

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Around the world:							
British.....	1	16,521	10,086	20,175	12,162	\$12,607.50	.....
German.....	2	32,631	19,978	52,029	25,332	24,972.50	125
Total.....	3	49,152	30,064	72,204	37,494	37,580.00	125
United States to South America:							
United States.....	2	7,381	5,327	8,820	5,291	5,125.50	901
United States to West Indies:							
Norwegian.....	2	12,183	10,141	16,847	10,063	12,676.25	23,752
Canada to South America:							
United States.....	2	10,060	7,095	11,232	7,063	8,868.75	7,902
South America to Canada:							
British.....	2	17,602	15,241	28,377	15,913	19,051.25	37,551
Far East to United States:							
Japanese.....	2	11,562	8,788	14,260	8,653	10,985.00	6,754
Far East to Europe:							
Norwegian.....	1	4,681	2,496	4,400	2,527	3,120.00	7,300
Swedish.....	1	3,979	3,326	5,673	4,161	4,157.50	5,962
Total.....	2	8,660	5,822	10,073	6,688	7,277.50	13,262
Canadian intercoastal:							
British.....	1	4,186	3,322	5,465	3,400	4,152.50	6,054
Canada to West Indies:							
British.....	1	2,207	1,239	2,338	1,249	1,548.75	3,120
Central America to Europe:							
German.....	1	2,292	1,364	2,359	1,356	1,705.00	985
Hawaii to Europe:							
British.....	1	5,389	2,898	4,739	2,876	3,622.50	7,525
Australasia to Canada:							
British.....	1	5,494	4,403	7,178	4,413	5,503.75	1,800
Far East to West Indies:							
Norwegian.....	1	4,979	2,737	4,695	2,727	3,421.25	7,750
Grand total, May, 1931.....	209	1,103,593	812,683	1,386,380	833,572	1,013,320.72	1,405,608
Grand total, May, 1930.....	245	1,208,459	908,637	1,511,430	918,912	1,130,630.00	1,580,543
Grand total, May, 1929.....	246	1,167,810	897,630	1,481,885	906,931	1,132,242.80	1,616,479

United States Intercoastal Traffic by Commodities for May, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for May, 1931, and the totals for May, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	309	243	552
Alfalfa.....	.....	1,208	1,208
Alfalfa meal.....	.....	941	941
Ammonia.....	18	.....	18
Asbestos.....	51	.....	51
Asphalt.....	206	42	248
Automobiles.....	9,102	625	9,727
Automobile accessories.....	881	30	911
Bamboo.....	.....	57	57
Bark:			
Casaca.....	.....	5	5
Other and unclassified.....	.....	22	22
Barley.....	18	250	268
Beans.....	5	3,052	3,057

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Blood and tannage.....	35		35
Bones and bonemeal.....		16	16
Borax.....	25	552	577
Bran.....		39	39
Bricks.....	281		281
Burlap.....	103	311	414
Calcium carbide.....	133		133
Camphor.....		50	50
Canned:			
Fish.....	80	8,304	8,384
Fruit.....	971	14,159	15,130
Meat.....	113	78	191
Milk.....	20	212	232
Soup.....	1,837		1,837
Vegetables.....	213	1,442	1,660
Miscellaneous and unclassified.....	1,579	9,291	10,870
Carbon black.....	255		255
Celite filtercel.....		2,474	2,474
Cement.....	275	193	468
Charcoal.....	341	50	391
Chemicals.....	2,375	625	3,000
China and fire clay.....	122	222	344
Coal.....	2,276		2,276
Cocoa.....	181	64	245
Coconuts.....	48	517	565
Coffee.....	486	87	573
Coke.....	534		534
Cold storage:			
Cheese.....		93	93
Eggs.....		846	846
Other.....	172		172
Confectionery.....	450	58	508
Cork.....	68	22	90
Cotton.....	222	949	1,171
Cyanide.....	5		5
Drugs and medicines.....	1,061	153	1,214
Earthenware.....	274	152	426
Eggs, dried.....		51	51
Explosives.....	151		151
Fish meal.....		32	32
Flour.....	356	4,593	4,949
Fruit:			
Dried.....	63	4,089	4,152
Fresh.....		2,849	2,849
Fullers' earth.....		47	47
Furniture.....	342	137	479
General.....	28,952	10,454	39,406
Glass and glassware.....	3,012	131	3,143
Glue.....	20	121	141
Guano.....		18	18
Gum.....		7	7
Hair.....	50	566	616
Hardwoods.....	213	125	338
Hay.....		463	463
Hemp.....		72	72
Honey.....	16	73	89
Hops.....		131	131
Infusorial earth.....		481	481
Jute.....	100		100
Kapok.....		111	111
Lard substitute.....	1,075		1,075
Leather.....	17		17
Linoleum.....	365	267	632
Liquors.....	54	50	104
Lumber.....	2,026	153,197	155,223
Malt.....	107		107
Manufactured goods:			
Iron and steel.....	69,435	736	70,171
Machinery.....	5,912	536	6,448
Railroad material.....	1,264		1,264
Tinplate.....	6,979	30	7,009
Textiles.....	6,096	396	6,492
Miscellaneous.....	9,408	1,423	10,831
Marble.....		23	23
Matches.....	222	50	272
Metals:			
Copper.....	42	6,557	6,599
Iron.....	1,250		1,250
Lead.....	47		47
Scrap.....	256	245	501
Tin.....		125	125
Zinc.....	36	306	342
Other.....	468		468
Milk, powdered.....		781	781
Molasses.....	150		150

	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Musical instruments.....	6		6
Nitrates.....		30	30
Nuts.....	210	76	286
Oats.....	39		39
Oils:			
Cottonseed.....	434		434
Crude.....	900		900
Gas oil, fuel oil.....	15	12,487	12,502
Gasoline, benzine, naphtha.....	69	193,837	193,906
Linseed.....	39		39
Lubricating and greases.....	9,276	886	10,162
Olive.....	50		60
Vegetable.....	585	219	804
Wood.....	55		55
Other.....		275	275
Ores:			
Copper.....	300		300
Magnesite.....		181	181
Zinc.....		270	270
Other.....	180		180
Paint.....	556	3,534	4,090
Paper.....	5,123	7,270	12,393
Paper pulp.....	50	7,571	7,621
Paper roofing.....	38		38
Peanuts.....	991	581	1,572
Peas.....		25	25
Phosphates.....	1,102		1,102
Porcelain.....	90	68	158
Quicksilver.....		6	6
Rags.....		601	601
Rice.....	231	25	256
Rope.....	200	67	267
Rosin.....	965		965
Rubber:			
Manufactured.....	1,001	321	1,322
Scrap.....	15	455	470
Salt.....	289		289
Sand.....	30		30
Seeds:			
Grass.....		105	105
Hemp.....		55	55
Other.....	24	747	771
Shells.....	1,711		1,711
Silk.....		1,748	1,748
Skins and hides.....		2,735	2,735
Slate.....	223		223
Soap.....	2,399	156	2,555
Soda.....	544		544
Soda ash.....	743	40	783
Soda, bicarbonate.....	142		142
Soda, caustic.....	566		566
Starch.....	55		55
Sugar.....	40	11,966	12,006
Sulphur.....	5,220		5,220
Syrup.....	145		145
Talc.....		171	171
Tallow.....		682	682
Tar.....	115		115
Tea.....		25	25
Tobacco.....	903	35	938
Toys.....	55		55
Turpentine.....	51		51
Vegetables.....		46	46
Waste.....		58	58
Wax.....	104	148	252
Wheat.....		98	98
Wine.....		121	121
Wool.....		8,096	8,096
Zinc oxide.....	133		133
Total, May, 1931.....	199,626	492,524	692,150
Total, May, 1930.....	242,319	509,789	752,108
Total, May, 1929.....	294,255	546,192	840,447

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines, and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

Comparison of Canal Traffic in May, 1931, with May Traffic in Previous Years.

Commercial traffic through the Canal during the month of May, 1931, with 428 transits, was the lowest May traffic since 1925, when 372 vessels, aggregating 1,847,682 net tons (Panama Canal measurement), and carrying 1,823,042 tons of cargo were passed through. In comparison with May, 1930, traffic for the past month declined 51 transits (10.6 per cent), 233,674 net tons (9.7 per cent), and 336,164 cargo tons (16.2 per cent), and in comparison with May, 1929, decreased 96 transits (18.3 per cent), 311,946 net tons (12.5 per cent), and 611,387 cargo tons (24.1 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried through the Canal during the month of May each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of May.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	^a 138	475,004	584,020	1915.....	^a 102	361,197	465,567
1916.....	123	385,062	479,961	1916.....	63	199,687	257,843
1917.....	145	468,665	596,425	1917.....	150	483,213	588,213
1918.....	198	658,174	757,984	1918.....	172	547,839	627,669
1919.....	176	566,892	642,171	1919.....	169	510,416	576,385
1920.....	224	852,425	974,919	1920.....	206	712,170	781,208
1921.....	210	864,617	792,735	1921.....	241	951,323	966,601
1922.....	243	1,032,816	1,158,507	1922.....	228	951,455	907,075
1923.....	419	2,128,414	2,265,083	1923.....	331	1,550,482	1,630,656
1924.....	417	2,085,670	2,353,986	1924.....	436	2,179,073	2,249,559
1925.....	372	1,847,682	1,823,042	1925.....	389	1,004,596	1,996,570
1926.....	470	2,243,103	2,416,701	1926.....	433	2,064,549	2,169,787
1927.....	471	2,248,892	2,379,713	1927.....	456	2,185,651	2,312,351
1928.....	508	2,274,612	2,497,588	1928.....	538	2,454,886	2,469,226
1929.....	524	2,496,905	2,536,839	1929.....	534	2,468,483	2,555,250
1930.....	479	2,418,633	2,261,616	1930.....	515	2,498,385	2,502,519
1931.....	428	2,184,959	1,925,452	1931.....	^a 466	2,339,418	2,120,348

^a Canal opened August 15, 1914.

^a Average for 10½ months.

^a Average for 11 months of fiscal year.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending June 13, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
El Salvador.....	Panama Mail S. S. Co.	June 1.....	June 2.....	17	18
Defiance.....	Roosevelt S. S. Co.	June 1.....	June 1.....	218	
Chateau Thierry.....	U. S. Government.....	June 1.....	June 2.....	20	8
Amalthus.....	Anglo-Saxon Petroleum Co.	June 2.....	June 4.....	7,739	
Saramacca.....	United Fruit Co.	June 3.....	June 4.....	265	5
Recherche.....	Messageries Maritimes.....	June 4.....	June 5.....		81
Virginia.....	Panama-Pacific Line.....	June 5.....	June 5.....		169
City of Panama.....	Panama Mail S. S. Co.	June 5.....	June 5.....	32	10
Cambrai.....	U. S. Government.....	June 5.....	June 5.....	6	20
Vega.....	U. S. Government.....	June 6.....	June 6.....	120	53
Santa Teresa.....	Grace Line.....	June 6.....	June 6.....	155	177
Europa.....	East Asiatic Co.	June 8.....	June 8.....		68
Nora.....	Arrow Oil Co.	June 8.....	June 8.....	13,659	
Santa Clara.....	Grace Line.....	June 8.....	June 8.....		2
Ecuador.....	Panama Mail S. S. Co.	June 9.....	June 10.....	171	
Bokuyo Maru.....	Nippon Yusen Kaisha.....	June 10.....	June 10.....	26	
San Mateo.....	United Fruit Co.	June 10.....	June 10.....	142	111
Santa Barbara.....	Grace Line.....	June 12.....	June 12.....	129	

Hours of Departure of Passenger Trains.

12.15 p. m., 4.30 p. m.; Sunday only, 9.20 a. m., 4.00 p. m.

Following are the hours of departure of the regular passenger trains of the Panama Railroad running between the Atlantic and the Pacific:

From Colon: Daily except Sunday, 7.00 a. m.,

From Panama: Daily except Sunday, 7.05 a. m., 12.20 p. m., 4.35 p. m.; Sunday only, 7.05 a. m., 6.15 p. m.

The time required for passage from one terminal to the other is 1 hour and 45 minutes.

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., June 24, 1931.

No. 47.

CANAL WORK IN MAY, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of May, 1931.

BALBOA HEIGHTS, C. Z., June 16, 1931.

The Honorable, the Secretary of War,
Washington, D. C.

SIR: I have the honor to submit the following report covering operations of The Panama Canal during the month of May, 1931:

TRANSITS AND TOLLS.

During the month, 428 commercial vessels and 10 small nonseagoing launches under 20 tons transited the Canal. In addition to these there were 19 vessels belonging to the United States Government on which no tolls were collected, making a total of 457 transits for the month, or a daily average on all traffic of 14.74.

Tolls on the 428 commercial vessels amounted to \$1,923,452.18, and on the launches to \$44.70, a total of \$1,923,496.88, or a daily average on all traffic of \$62,048.29.

Commercial traffic in the past month was the lowest since November, 1926, during which month the same number of vessels, 428, made the transit. The daily average of commercial transits for May, 1931 (13.81), was the lowest since October, 1925, in which month the daily average was 13.23 transits. The daily average tolls collection on commercial traffic in the past month, \$62,046.84, was the lowest since June, 1926, when the daily average was \$61,755.69. In comparison with May, 1930, commercial traffic for the past month was lower by 51 transits and \$239,446.42 in tolls, or 10.6 per cent and 11.1 per cent, respectively. In comparison with the previous month there was a decrease of 25 transits and \$90,896.95 in tolls, or 5.5 per cent and 4.5 per cent, respectively.

Commercial traffic for the first 11 months of the current fiscal year in comparison with the same period last year shows a decrease of 10.1 per cent in transits, 6.8 per cent in net tonnage (Panama Canal measurement), 16.4 per cent in cargo passing through, and 8.6 per cent in tolls assessed.

The total number of craft of all kinds transiting the Canal during the month of May in the two preceding years and in 1931 are shown in the following tabulation:

	May, 1929.	May, 1930.	May, 1931.
Commercial vessels.....	524	479	428
Launches (under 20 tons).....	18	14	10
Noncommercial vessels:			
United States Government.....	40	48	19
Panamanian Government.....	1	2	.....
Vessels for repairs.....	2	3	.....
Total.....	585	546	457

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	5	8	13
Pedro Miguel.....	31	28	59
Miraflores.....	24	26	50
Total.....	60	62	122

COMMERCIAL TRAFFIC.¹

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected, from the commercial traffic transiting the Canal each month from the beginning of the fiscal year 1931 to the end of May, 1931, as compared with the same months in the previous year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August . . .	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September . .	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.56
October . . .	564	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,982.08
November . .	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December . .	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January . . .	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February . . .	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
April	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
May	479	428	2,418,633	2,184,959	2,261,616	1,925,452	2,162,898.60	1,923,452.18
Total	5,707	5,129	27,622,377	25,733,600	27,883,051	23,323,824	24,975,895.48	22,824,047.84

¹ Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

The following is a summary of the commercial traffic for May in the years 1929, 1930, and 1931, and comparison with the monthly averages for the calendar year 1930:

	May, 1929.	May, 1930.	May, 1931.	Average per month for calendar year 1930.
Number of vessels	524	479	428	490
Panama Canal net tonnage	2,496,905	2,418,633	2,184,959	2,438,406
United States net tonnage	1,909,014	1,814,723	1,598,734	1,826,376
Registered gross tonnage	3,150,598	3,017,627	2,699,985	3,025,071
Registered net tonnage	1,921,410	1,832,657	1,627,188	1,839,006
Tolls	\$2,296,546.57	\$2,162,898.60	\$1,923,452.18	\$2,178,835.41
Tons of cargo carried	2,536,839	2,261,616	1,925,452	2,320,662

The average daily number of transits, net tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for calendar year 1930.
	May, 1929.	May, 1930.	May, 1931.	
Number of transits	16.90	15.45	13.81	16.12
Panama Canal net tonnage	80,545	78,020	70,483	80,167
Tolls	\$74,082.15	\$69,770.92	\$62,046.84	\$71,632.95
Tons of cargo carried	81,833	72,955	62,111	72,296

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of May in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	May, 1929.	May, 1930.	May, 1931.
Panama Canal net tonnage	4,765	5,049	5,105
United States net tonnage	3,643	3,789	3,735
Registered gross tonnage	6,012	6,300	6,308
Registered net tonnage	3,667	3,826	3,802
Tolls	\$4,382.72	\$4,515.45	\$4,494.05
Tons of cargo (including vessels in ballast)	4,841	4,721	4,499
Tons of cargo (laden vessels only)	5,726	5,516	5,363

NATIONALITY OF VESSELS.

Fourteen nationalities were represented in the commercial traffic through the Canal in May, 1931. Vessels of the United States registry, with 191, led in the number of transits, while those flying the British flag, with 97, were second. Vessels of these

two nationalities made up 67.3 per cent of the total transits for the month. Vessels of German and Norwegian registry were next with 32 and 29 transits, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of May was 1,925,452 tons, a decrease of 336,164 tons, or 14.9 per cent, in comparison with May, 1930. Cargo from the Atlantic to the Pacific aggregated 519,844 tons, as compared with 553,609 tons for the previous month, and 681,073 tons in May, 1930. From the Pacific to the Atlantic there were 1,405,608 tons, as compared with 1,457,508 tons for the previous month and 1,580,543 tons in May, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 165,006 tons, constituted the heaviest item of cargo, followed by phosphates with 44,274 tons, mineral oils with 32,445 tons, cement with 18,812 tons, cotton with 15,385 tons, paper with 15,307 tons, and tobacco with 14,303 tons. There was a decrease of 161,229 tons, or 23.7 per cent, in cargo moving in this direction as compared with May, 1930.

From the Pacific to the Atlantic mineral oils constituted the leading commodity, totaling in May, 1931, 314,546 tons. This was followed by lumber with 218,585 tons; wheat with 157,084 tons; sugar with 123,574 tons; ores with 98,325 tons; and nitrates with 71,040 tons. Wheat shipments via the Canal increased 44,045 tons, or 39 per cent, over May, 1930, and sugar shipments increased 8,658 tons, or 7.5 per cent. The other above-listed items decreased as follows in comparison with May, 1930: Mineral oils, 94,434 tons, or 23.1 per cent; lumber, 77,379 tons, or 26.1 per cent; ores, 76,015 tons, or 43.6 per cent; and nitrates, 32,289 tons, or 31.2 per cent. In aggregate there was a decrease of 174,935 tons, or 11.1 per cent, in cargo routed in this direction in comparison with May, 1930.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules of measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.904 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.7195 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of May, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flags:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$15,391.49	\$16,211.20	\$819.71	
British.....	484,891.24	517,933.00	33,041.76	
Chilean.....	8,663.75	9,423.80	760.05	
Colombian.....	1,540.30	1,301.00		\$239.30
Danish.....	42,917.00	44,659.00	1,742.00	
Dutch.....	34,115.00	43,639.00	9,524.00	
French.....	24,722.50	29,247.00	4,524.50	
German.....	119,643.55	143,646.00	24,002.45	
Italian.....	34,237.50	38,504.00	4,266.50	
Japanese.....	83,484.95	81,125.00		2,359.95
Norwegian.....	118,964.82	131,647.40	12,682.58	
Panamanian.....	4,688.47	7,044.00	2,355.53	
Swedish.....	44,153.80	48,420.00	4,266.20	
United States.....	906,037.81	955,773.60	49,735.79	
Total.....	1,923,452.18	2,068,574.00	147,721.07	2,599.25
Net increase on all traffic.....			145,121.82	

* Includes naval vessel paying \$2,750 on displacement tonnage.

* Includes Merchant Marine training vessel paying \$529 on displacement tonnage.

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$27,714.67
United States foreign trade.....	23,102.60
United States—Canal Zone trade.....	* 1,081.48
Total.....	49,735.79

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in May, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	.35	1.60	.94
British.....	.61	1.16	.95
Chilean.....	.42	.62	.52
Colombian.....	1.07	1.09	1.08
Danish.....	1.00	1.63	1.31
Dutch.....	.39	1.31	.79
French.....	.32	1.32	.87
German.....	.43	.88	.74
Italian.....	.19	.63	.39
Japanese.....	1.11	1.25	1.18
Norwegian.....	.94	1.63	1.39
Panamanian.....		.97	.97
Swedish.....	.69	2.77	1.91
United States.....	.68	1.32	1.04
Averages, May, 1931.....	.66	1.28	1.02
Averages, May, 1930.....	.76	1.32	1.09
Averages, May, 1929.....	.93	1.44	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of May is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	3	14,415	\$15,106.25	29	169,506	\$173,888.75
Ballast.....	23	154,080	110,810.43	1	4,775	3,438.00
General cargo ships:						
Laden.....	153	772,743	680,047.15	174	879,983	798,284.40
Ballast.....	31	139,988	100,801.38			
Noncargo-carrying ships:						
Naval.....	2		3,279.00			
Passenger.....				3	49,152	37,580.00
Tugs.....	1	78	40.00			
Yachts.....	1	62	47.25	2	177	129.57
Total.....	219	1,081,366	910,131.46	209	1,103,593	1,013,320.72
Method of propulsion:						
Steam.....	145	706,060	611,723.64	151	814,322	756,461.55
Motor.....	74	375,306	298,407.82	58	289,271	256,859.17
Total.....	219	1,081,366	910,131.46	209	1,103,593	1,013,320.72

Of the 296 steam-driven vessels, 224 were oil burning and 72 coal burning.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of May, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Ammunition ships.....	2 1			2 1	4,405	\$5,506.25
Cruisers.....	2 1	8,900	\$4,450.00			
Gunboats.....	2 1	1,425	712.50			
Minesweepers.....				2 1	950	475.00
Submarines.....	2 4	4,725	2,362.50	2 3	2,745	1,372.50
Tankers.....	2 1	6,258	4,693.50	2 1	6,258	7,822.50
Transports.....	2 1	3,908	4,885.00			
U. S. Army vessels:						
Transports.....	2 2	9,217	11,521.25	2 1	3,908	4,885.00
Tugs.....	2 1	46	57.60	2 1	46	34.50
Total.....	11		28,682.25	8		20,095.75

* Indicates displacement tonnage.

* Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of May, 1931, carried cargo as follows: Atlantic to Pacific, 2,324 tons; Pacific to Atlantic, 11,737 tons; total, 14,061 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of May, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic:

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	8	37	\$39.45
Pacific to Atlantic.....	2	7	5.25
Total.....	10	44	44.70

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of May, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons..	71,443	49,286	120,729
Local cargo shipped..... tons..	7,473	352	7,825
Transit cargo arriving..... tons..	1,932,828	1,933,996	3,866,824
Transit cargo clearing..... tons..	1,930,816	1,944,114	3,874,930
Cargo received for transshipment..... tons..	27,402	1,241	28,643
Cargo transshipped..... tons..	27,410	400	27,810
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	115	44	159
Number of releases issued.....	781	218	999
Tons received.....	1,538	283	1,821
Tons withdrawn.....	1,329	265	1,594
Packages received.....	9,756	1,994	11,750
Packages withdrawn.....	8,471	2,092	10,563
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	29	1	30
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons..	14,243	52	14,295
Coal issued, miscellaneous:			
Panama Canal departments..... tons..	22	9	31
U. S. Army, including vessels..... tons..	82		82
Panama Railroad Company..... tons..	9		9
Individuals and companies, including galley coal for ships..... tons..	85		85
Transferred to Navy..... tons..	61		61
Total sales and issues..... tons..	14,502	61	14,563

	Cristobal.	Balboa.	Total.
Coal on hand, May 1, 1931..... tons..	53,629		53,529
Coal on hand, June 1, 1931..... tons..	49,637		49,637
Coal received during month..... tons..	10,510		10,510
Coal received from Navy..... tons..		61	61
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls..	4,498.21	15,229.30	19,727.51
Panama Railroad Company..... bbls..	803.79	539.55	1,343.34
U. S. Army and Navy..... bbls..		134.75	134.75
Individuals and companies..... bbls..		119.76	119.76
Total sales and issues..... bbls..	5,302.00	16,023.36	21,325.36
Fuel oil received during May, 1931..... bbls..		66,715.15	66,715.15
Fule oil on hand, June 1, 1931..... bbls..	50,960.81	77,996.14	128,956.95
Diesel oil issued and sold during May, 1931..... bbls..	184.73	1,977.46	2,162.19
Diesel oil on hand, June 1, 1931..... bbls..	1,083.35	20,135.18	21,218.53
Miscellaneous transfers..... bbls..	353.96	611.32	965.28
Gasoline and kerosene pumped for The Panama Canal..... bbls..	12,782.70	28,353.20	41,135.90
Gasoline pumped for individuals and companies..... bbls..	838.03	18,411.95	19,249.98
Oil pumped for individuals and companies:			
Receipts..... bbls..	179,357.67	216,487.40	395,845.07
Issues..... bbls..	196,398.80	150,336.02	346,734.82
Oil pumped for U. S. Navy..... bbls..	51,700.00	26,195.93	77,895.93
Total fuel oil, gasoline, and kerosene handled..... bbls..	446,917.89	525,111.79	972,029.68
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	14	1	15
Measured for Panama Canal net tonnage.....	2		2
Remeasured for Panama Canal net tonnage.....	10	3	13
Panama Canal net tonnage corrected.....	9	5	14
U. S. equivalent tonnage corrected.....	3	8	11
Services of harbor equipment:			
Tugs, total operating hours.....	292 $\frac{1}{2}$	181 $\frac{1}{2}$	473 $\frac{3}{4}$
Launches, total operating hours.....	1,165	1,232 $\frac{1}{2}$	2,397 $\frac{1}{2}$
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$10,040.00	\$6,265.00	\$16,305.00
Pilotage.....	17,610.00	7,706.00	25,316.00
Seamen.....	9,924.00	9,710.00	19,634.00
Launch service.....	1,810.50	2,348.50	4,159.00
Wharfrage.....	14,619.66	6,078.82	20,698.48
Ships measured.....	60.00		60.00
Miscellaneous.....	936.15	475.78	1,411.93
Ships repaired at Panama Canal shops:			
Commercial.....	42	6	48
U. S. Government.....	10	7	17
Panama Canal equipment.....	3	10	13
Total.....	55	23	78
Vessels dry-docked:			
Commercial.....	6	1	7
U. S. Government.....	3	1	4
Panama Canal equipment.....		8	8
Total.....	9	10	19
Clearances issued.....	262	231	493
Bills of health issued.....	270	232	502

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	475	3,053,963	1,848,725	446	2,827,154	1,714,642
Vessels entering port but not transiting Canal.	61	294,168	175,514	9	51,538	33,386
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	127	861,915	515,960	103	738,159	434,585
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	483	3,082,266	1,870,346	447	2,829,245	1,710,980
Vessels clearing port but not transiting Canal.	63	300,827	183,889	11	57,132	36,952
Ves cls transiting Canal and handling passengers and cargo at terminal ports.....	134	893,812	534,482	105	751,372	443,721

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class.	Others.	Total.	First-class.	Others.	Total.
Disembarking:						
From Atlantic ports	895	668	1,563	80	81	161
From Pacific ports	240	350	590	245	202	447
Total disembarking	1,135	1,018	2,153	325	283	608
Embarking:						
For Atlantic ports	1,271	809	2,080	121	204	325
For Pacific ports	226	254	480	188	186	374
Total embarking	1,497	1,063	2,560	309	390	699
Remaining on board:						
From Atlantic to Pacific ports	1,006	1,651	2,657	1,632	2,256	3,888
From Pacific to Atlantic ports	1,642	3,043	4,685	2,423	2,273	4,696
From Atlantic to Atlantic ports	434	190	624			
From Pacific to Pacific ports				14	213	227
Total remaining on board	3,082	4,884	7,966	4,069	4,742	8,811
Total arriving	4,217	5,902	10,199	4,394	5,025	9,419
Total departing	4,579	5,947	10,526	4,378	5,132	9,510

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Pasenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific	219	59	26.9
Pacific to Atlantic	209	59	28.2
Total	428	118	27.6

In addition to the aforesaid, 55 passenger-carrying vessels called at the port of Cristobal and 5 at Balboa without transiting the Canal, making a total of 178 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of May, 1931, 38 commercial airplanes entered and cleared at Cristobal, and none at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of May, 1931, together with the total sales in the corresponding months in 1930 and 1929:

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,401.45	\$7,762.85	\$17,517.68	\$164.58	\$6,565.68	\$33,412.24
Government vessels	164.00	1,966.89	6,232.91	35.12	1,330.64	9,729.56
P. R. R. vessels	3.60	250.38	209.57	561.16	47.99	1,072.70
Total sales, May, 1931	1,569.05	9,980.12	23,960.16	760.86	7,944.31	44,214.50
Total sales, May, 1930	2,254.57	13,204.68	36,038.35	821.43	7,392.27	59,711.30
Total sales, May, 1929	3,483.25	16,972.62	48,163.53	1,037.30	9,482.32	79,139.02
Sales at Balboa to:						
Commercial vessels	545.50	1,149.51	8,075.45	395.09	6,222.33	16,387.88
Government vessels	243.60	1,582.24	13,903.95	454.21	1,960.62	18,144.62
P. R. R. vessels				32.30		32.30
Total sales, May, 1931	789.10	2,731.75	21,979.40	881.60	8,182.95	34,564.80
Total sales, May, 1930	1,021.78	5,856.22	43,842.09	1,393.65	13,528.21	65,641.95
Total sales, May, 1929	1,374.55	13,343.59	39,350.48	825.07	5,208.25	60,101.94

The aggregate sales to Government vessels during the month was \$27,874.18; to Panama Railroad vessels, \$1,105; and to other commercial vessels, \$49,800.12, making the total sales to all vessels, \$78,779.30. These figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of May, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand total.		
	Commercial.			Noncommercial. *					
	North.	South.	Total.	North.	South.	Total.	May, 1929.	May, 1930.	May, 1931.
Gatun.....	206	204	410	5	10	15	512	492	425
Pedro Miguel.....	204	210	414	12	18	30	508	510	444
Miraflores.....	205	209	414	12	15	27	504	499	441
Number of vessels put through locks.									
Gatun.....	210	219	429	22	27	49	605	581	478
Pedro Miguel.....	209	219	428	44	45	89	642	596	517
Miraflores.....	209	219	428	37	46	83	628	596	511

* Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels.....	21	25	27
Panama Canal equipment.....	13	59	50
Launches (under 20 tons).....	15	5	6

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in May, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
Lockages.....	<i>Cubic feet.</i> 1,604,740,000	<i>Cubic feet.</i> 1,230,410,000	<i>Cubic feet.</i> 1,285,050,000
Maintenance.....	34,880,000		
Leakage.....	30,000,000	25,000,000	20,000,000
Total, May, 1931.....	1,669,620,000	1,255,410,000	1,305,050,000
Total, April, 1931.....	1,464,810,000	1,059,240,000	1,053,980,000
Total, May, 1930.....	1,922,370,000	1,477,540,000	1,494,830,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of May, 1931, are shown in comparative form in the following tabulation:

	May,		May—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela.....	<i>C. f. s.</i> 2,069	<i>C. f. s.</i> 1,911	<i>C. f. s.</i> 5,220	<i>C. f. s.</i> 491	<i>C. f. s.</i> 2,082
Maximum momentary discharge for the month.....	15,986	18,200	61,200		
Gatun Lake watershed, total yield.....	4,596	4,835	8,665	1,417	4,570
Gatun Lake watershed, net yield.....	4,037	4,238	7,964	583	3,919
Draft on Gatun Lake for lockages and power.....	2,910	2,801	2,910	1,067	2,132

* May 5, 1918.

* 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for May, 1931, was 1,911 c. f. s., which is 8 per cent below the 30-year average of 2,082 c. f. s. The maximum monthly mean discharge on record for May is 5,220 c. f. s. in 1910, and the minimum, 491 c. f. s. in 1920. The maximum momentary discharge for the month was 18,200 c. f. s. at elevation 100.90 feet on the 27th, and the minimum momentary discharge was 552 c. f. s. at elevation 91.74 feet on the 5th and 9th. The maximum momentary discharge on record for May is 61,200 c. f. s. at elevation 110.00 feet on May 5, 1918, and the minimum, 231 c. f. s. at elevation 90.17 feet on May 11, 1920.

Gatun Lake varied in elevation during May from a minimum of 82.08 feet on the 13th to a maximum of 83.43 feet on the 30th. The total yield of the Gatun Lake watershed was 4,835 c. f. s., or 6 per cent above the 18-year average of 4,570 c. f. s. The maximum total yield on record for May is 8,665 c. f. s. in 1918, and the minimum, 1,417 c. f. s. in 1920.

Miraflores Lake varied in elevation from a maximum of 54.22 feet on the 13th to a minimum of 53.00 feet on the 27th. The mean elevation was 53.61 feet, and at midnight on the 31st the lake was at elevation 53.77 feet.

SEISMOLOGY.

Slight seismic disturbances were recorded on May 1st and 15th.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,674,400 kilowatt hours, and the computed water consumption was 4,318,625,448 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 7,900 kilowatt hours, and the fuel oil consumption was 32.74 barrels. This station was operated only for peak load service during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 33 vessels during the month. There were 393 work orders issued during the month, as compared with 400 issued during the previous month.

MECHANICAL DIVISION.

During the month of May, 1931, miscellaneous repairs were made on 55 vessels at Cristobal and 23 at Balboa. Nine vessels were dry-docked at Cristobal and 10 at Balboa. Annual overhaul and alterations were begun on the Navy minesweeper *Chewink* during the month. The U. S. S. *Rochester* returned to Balboa for continuation of her overhaul.

MUNICIPAL ENGINEERING DIVISION.

On the Thatcher Highway under construction from the west bank of the Canal opposite Balboa to the Zone boundary line near Arraijan, 2,800 cubic yards of grading were performed and 1,334 cubic yards of rock were crushed. All work on this project, with the exception of the rock crushing, has been suspended. On the Farfan Beach road, 3,500 feet of clearing were completed, 1,600 cubic yards of earth were excavated and placed for grading, and 4 culverts were constructed.

Work on several improvement projects in the cities of Panama and Colon was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 763,115,500 gallons.

DREDGING DIVISION.

The general movement along the waterfront of west Culebra slide continued throughout the month with an average of 0.4 foot toward the Canal between stations 1771-00 and 1794-00 W. and 0.5 foot southward between stations 1772-00 and 1776-00 W. The reference points on this slide showed no perceptible movement. On the 16th of the month the 95-foot berm between stations 1828-00 and 1830-W. broke off and went into the prism, shoaling out 50 feet beyond the west prism line. A dredge worked 13 days between stations 1825-00 and 1835-00 W., removing 26,950 cubic yards of material. An additional dredge worked one-half day on the same slide, between stations 1830-00 and 1830-25 W., removing 1,000 cubic yards of material.

A dredge worked three days in front of Cucaracha village slide, between stations 1838-00 and 1840-E., excavating 4,000 cubic yards of material. Five observation points were placed on Cartagena slide and observed frequently during the month. Small bank breaks occurred in a number of places throughout the Cut due to recent heavy rains.

The total excavation during May, 1931, was 814,320 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
	Cubic yds.	Cubic yds.	Cubic yds.
Work excavation:			
Canal prism, Gatun Lake—			
Project No. 4.....	600	2,800	3,400
Canal prism, Gaillard Cut—			
Project No. 3.....	250	2,350	2,600
Project No. 5.....	14,450	100,000	114,450
Maintenance.....	6,850	10,700	17,550
Cucaracha signal station slide.....	2,900	25,050	27,950
Cucaracha village slide.....	800	3,200	4,000
Canal prism, Pacific entrance—			
Project No. 1-B.....	204,300		204,300
Maintenance.....	151,800		151,800
Balboa inner harbor—			
Maintenance.....	286,200		286,200
Plant excavation:			
Chame sand service.....	2,070		2,070
Total.....	670,220	144,100	814,320

The ferry operating at the north end of Pedro Miguel locks functioned 31 days during the month. One thousand three hundred sixty-eight (1,368) single trips were made, and 147 Panama Canal, 200 U. S. Army, and 5,702 other vehicles, a total of 6,049, were ferried across the Canal.

MADDEN DAM PROJECT.

On the Summit-Madden Dam transmission line the final grading and backfill was concluded with towers Nos. 12 to 25, inclusive, and Nos. 36 to 81, inclusive. The curing of the concrete footings was concluded with tower 81 on May 27. The steel for the transmission towers arrived during the month and erection commenced. At the end of the month 6 towers were completed and 2 were 50 per cent completed.

Work was started on May 4 on the construction of 5 cottages, 1 bachelor building, and a mess hall, which will be a part of the Government camp.

Considerable data were forwarded to the Designing Engineer who is in Denver in consultation with the United States Bureau of Reclamation.

Filling of parts of sinkholes Nos. 20 and 5 was authorized, equipment prepared, and some preliminary work done.

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on May 31, 1931, was 24,137, composed of 8,130 Americans, 2,853 of whom were men, 2,496 women, and 2,781 children; 167 Europeans, 75 of whom were men, 31 women, and 61 children; and 15,840 West Indians, 4,368 of whom were men, 2,840 women, and 8,632 children. The total number of persons in quarters on May 31, 1931, was 22,768.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of May 20, 1931, with a comparison of the working force for the preceding month and for May, 1930:

	Total employees.		As of May 20, 1931.		
	May, 1930.	April, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	136	120	55	51	106
Electrical.....	388	381	169	206	375
Municipal Engineering.....	1,034	996	91	782	873
Lock Operation.....	947	1,066	237	698	935
Dredging.....	1,272	1,197	201	971	1,172
Madden Project.....	920	371	25	233	258
Mechanical.....	1,405	1,337	470	910	1,380
Marine.....	897	828	196	551	747
Fortifications.....	158	159	19	86	105
Total.....	7,157	6,455	1,463	4,488	5,951
Supply Department:					
Quartermaster.....	2,275	1,750	201	1,545	1,746
Commissary.....	1,546	1,541	241	1,307	1,548
Cattle Industry—Plantations.....	96	179	2	95	97
Hotel Tivoli.....	115	124	8	104	112
Hotel Washington.....	111	108	8	91	99
Transportation.....	331	309	73	233	306
Total.....	4,474	4,011	533	3,375	3,908
Accounting Department.....	211	209	205	6	211
Health Department.....	1,179	1,112	288	821	1,109
Executive Department.....	863	885	551	332	883
Total.....	2,253	2,206	1,044	1,159	2,203
Panama Railroad Company:					
Superintendent.....	332	291	44	240	284
Transportation.....	184	184	61	118	179
Receiving and Forwarding Agency.....	1,348	1,488	79	1,292	1,371
Coaling Stations.....	318	245	42	199	241
Total.....	2,182	2,208	226	1,849	2,075
Grand total, May, 1930.....	16,066				
Grand total, April, 1931.....		14,880			
Grand total, May, 1931.....			3,266	10,871	14,137

Additions to the gold force on the Isthmus in May were as follows: Employed in the United States, 2; employed on the Isthmus, 10; reemployed on the Isthmus, 8; total, 20. Separations from the gold force totaled 36, as follows: Resigned, 10; discharged, 22; retired, 2; died, 2. At the end of the month there were on file 850 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 162 deaths occurred during the month of May, 1931, among the population of the Canal Zone and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 13.61 per 1,000 population. The leading causes of death were: Tuberculosis (various organs), 23; pneumonia (broncho and lobar), 17; organic diseases of the heart, 15; diarrhea and enteritis, 13; cancer (various organs), 12; and nephritis (acute and chronic), 12. There were 7 deaths from arterio-sclerosis, 6 from apoplexy, and 1 from meningococcus meningitis. There were 27 deaths among nonresidents, which are not included in the above statistics.

There were 299 live births and 17 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 26.40. Deaths among children under 1 year of age numbered 26, giving an infant mortality rate based on the number of live births reported, of 86.96.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 226, of whom 15 were employees (2 white and 13 colored), 24 were members of employees' families (6 white and 18 colored), 13 were Canal Zone agriculturists, 63 were other civilian nonemployees, and 111 were Army and Navy personnel. Of the 39 employees and members of employees' families, 20 were probably infected outside our sanitated areas, as they gave a history of working, living, or having been in such areas at night previous to their becoming sick.

There was 1 death from malaria among residents, a colored child living in Frijoles.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$525,428.85, of which \$513,850.81 was for the Department of Operation and Maintenance, and \$11,578.04 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$30,410.14.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenue and expenditures for the month of April, 1931, as compared with April, 1930, with the figures for the first 10 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of May at the time of writing this report, since all charges, etc., involved in the accounting have not been completed:

	April, 1930.	April, 1931.	To end of May.	
			Last year.	This year.
Tolls.....	\$2,232,790.15	\$2,014,413.63	\$22,812,999.29	\$20,899,617.03
Other receipts.....	318,153.39	363,699.77	3,699,554.17	3,520,659.49
Total transit revenues.....	2,550,943.54	2,378,113.40	26,512,553.46	24,420,276.52
Total transit expenses.....	1,064,953.34	1,150,008.19	11,089,903.02	11,702,165.37
Net transit revenues.....	1,485,990.20	1,228,105.21	15,422,650.44	12,718,111.15
Three per cent capital charge.....	621,848.49	626,085.74	6,213,079.91	6,260,568.95
Transit surplus.....	864,141.71	602,019.47	9,209,570.53	6,457,542.20
Business revenues.....	1,545,760.58	1,274,018.07	16,598,939.79	14,904,393.01
Business expenses.....	1,469,352.57	1,190,634.02	15,665,908.65	14,204,016.53
Net business revenues.....	76,408.01	83,384.05	933,031.14	700,376.48
Three per cent capital charge.....	63,586.90	65,882.05	66,954.43	691,632.38
Business surplus.....	12,821.11	17,502.00	266,076.71	8,744.10
Combined revenues.....	4,096,704.12	3,652,131.47	39,709,182.08	39,323,669.53
Combined expenses.....	2,534,305.91	2,340,642.21	23,353,500.50	25,906,181.90
Net revenues.....	1,562,398.21	1,311,489.26	16,355,681.58	13,418,487.63
Three per cent capital charge.....	685,435.39	691,967.79	6,880,034.34	6,952,201.33
Combined surplus.....	876,962.82	619,521.47	9,475,647.24	6,466,286.30

Respectfully,

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, June 20, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.			Entered Canal.			Completed transit.			Cleared for sea.			Nationality.	Line (Charterer or operator.)			Length.	Beam, water draft.			From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.		Day.	Hour.		Day.	Hour.		Day.	Hour.			(Charterer or operator.)				Beam,	water	draft,			Nature.	Tons.	Gross.	Net.
Steel Voyager	14	6-20	14	6-30	14	13-24	14	13-24	14	14-40			American	Isthmian S. S. Lines			395.5	55.0	23.0			Pl. Allen, T. H.	General	5,489	7,330	5,249
Barak	12	17-30	14	8-30	14	15-02	14	16-10					Dutch	Royal Neth. S. S. Co.			202.0	33.1	10.8			Guayaquil, Ecuador	General	54	1,183	732
Robin Gray	14	12-35	14	12-40	14	19-12	14	20-22					American	Isthmian S. S. Lines			424.0	55.0	21.0			Vancouver, B. C.	Steel, general	5,014	7,472	5,542
Lagabank	14	13-35	14	13-45	14	19-42	14	23-20					British	Bark Line, Ltd.			426.9	57.0	21.1			Shanghai, China	General	2,931	7,507	5,346
Deftjank	14	9-30	14	15-00	14	21-45	14	22-45					German	Hamburg-American Line			438.0	55.6	18.0			Valparaiso, Chile	General	1,808	7,004	5,017
Mirabooka	14	10-30	15	6-00	15	13-06	15	14-15					Dutch	Holland-American Line			490.0	65.0	21.3			Vancouver, B. C.	General	2,670	11,724	8,266
Forbes	14	20-45	15	6-20	15	13-49	15	15-00					Swedish	Transatlantic S. S. Co.			457.0	57.0	10.6			Los Angeles, Calif.	Ballast	8,274	6,098	
Hauptman	15	6-15	15	7-15	15	14-51	15	16-15					American	Muson, McCorkle Line			409.8	54.2	21.6			Tacoma, Wash.	General	4,122	6,831	4,969
Guayaquil	13	19-05	15	8-50	15	15-43	15	16-55					American	Panama R. R. S. S. Line			351.0	43.6	18.0			Guayaquil, Ecuador	General	675	2,574	1,944
Peter Kerr	14	16-50	15	8-55	15	16-27	15	17-40					American	Quaker Line			415.0	55.6	18.2			Seattle, Wash.	General	2,192	7,704	5,696
Castana	15	9-40	15	10-00	15	17-23	15	18-38					American	U. S. Tankship Corp.			390.0	54.2	18.0			Los Angeles, Calif.	Ballast	6,205	4,286	
Alamar	15	12-05	15	12-20	15	19-42	15	20-43					American	Calmar Line			399.7	56.2	21.0			Seattle, Wash.	Steel, general	5,469	7,351	5,396
Duchessa	15	12-50	15	15-30	15	22-25	15	24-00					Italian	Nav. Libera Tristina			464.0	57.0	15.3			Vancouver, B. C.	General	436	8,734	6,144
D'Aosta	16	8-05	16	8-10	16	16-25	16	19-20					British	Jason Jones & Co.			400.0	53.5	25.7			Vancouver, B. C.	Sugar	7,150	6,246	4,489
Cape Corwin	16	8-50	16	9-10	16	16-07	16	17-10					American	Standard Oil Co.			468.3	62.7	20.0			Los Angeles, Calif.	Ballast	10,084	7,388	
China Arrow	15	20-15	16	11-00	16	18-52	16	20-30					American	N. O. & S. A. S. Co.			324.0	46.2	17.3			Talcahuano, Chile	General	1,732	3,978	2,560
Nosa King	16	12-15	16	12-25	16	18-50	16	20-25					American	Amer-Hawaiian Line			415.0	53.7	18.8			Seattle, Wash.	General	1,885	7,380	5,359
Alaskan	16	5-00	16	13-08	16	20-23	16	21-40					German	Hamburg-American Line			432.3	59.0	18.4			Portland, Ore.	General	2,775	8,454	6,344
Los Angeles	16	13-05	17	8-18	17	15-12	17	16-20					American	McCormick S. S. Co.			410.0	54.0	18.6			Buenos Aires, Arg.	General, bones	3,097	6,581	4,989
West Nilus	17	6-15	17	10-05	17	16-52	17	18-15					German	Hamburg-American Line			462.0	62.0	18.0			Vancouver, B. C.	Ballast	3,500	9,294	6,865
Leuna	17	12-00	17	12-30	17	19-05	17	20-30					American	Luckenbach Line			449.0	60.2	21.0			Seattle, Wash.	General	893	9,644	6,967
Lillian	17	12-00	17	12-30	17	19-05	17	20-30					American	Luckenbach Line			449.0	60.2	21.0			Seattle, Wash.	General	893	9,644	6,967
Pacific	17	12-00	17	12-30	17	19-05	17	20-30					American	Luckenbach Line			449.0	60.2	21.0			Seattle, Wash.	General	893	9,644	6,967
Reliance	18	8-40	18	9-05	18	13-38	18	14-45					British	Furness, Withy & Co.			435.9	60.1	17.8			Vancouver, B. C.	General	11,060	8,076	
Amerika	18	8-40	18	9-05	18	13-38	18	14-45					Danish	East Asiatic Co.			465.0	62.0	19.0			Vancouver, B. C.	General	3,613	6,840	4,979
Fernwood	18	16-15	18	19-25	19	9-16	19	10-09					Norwegian	Fern Line			390.0	55.0	21.0			Yokohama, Japan	Cotton, general	130	211	124
Caldas	12	22-00	18	19-25	19	9-16	19	12-10					Colombian	National Navigation Co.			116.0	21.0	9.5			Buenaventura, Col.	General	2,920	18,206	13,500
Rangtata	18	14-45	19	6-00	19	13-39	19	19-20					British	N. Z. Shipping Co.			531.0	70.0	26.7			Wellington, N. Z.	General	2,457	15,234	10,470
President	18	16-30	19	6-08	19	14-09	19	22-18					American	Dollar Line			518.0	72.0	26.11			Manila, P. I.	General	2,887	25,262	18,194
Grant	19	5-45	19	7-15	19	15-10	20	00-28					American	Panama-Pacific Line			586.4	80.3	30.0			San Francisco, Cal.	General	2,887	25,262	18,194
Pennsylvania	18	15-20	19	7-15	19	15-10	20	00-28					American	Panama-Pacific Line			586.4	80.3	30.0			San Francisco, Cal.	General	2,887	25,262	18,194
Patricia	18	15-20	19	7-15	19	15-10	20	00-28					German	Hamburg-American Line			374.0	53.0	15.9			Hamburg, Germany	General	1,064	5,370	3,467
Pat Doherty	18	20-25	19	8-20	19	16-22	19	17-45					American	Richfield Oil Co.			430.0	59.2	20.0			Champerico, Guatemala	Ballast	7,773	5,634	
Christine	19	5-40	19	10-10	19	16-47	19	18-40					Danish	Isbrandtsen Moller Co.			378.0	50.2	20.0			Manila, P. I.	General	3,465	5,526	4,066
Maersk	17	14-10	19	11-45	19	18-30	20	00-39					American	U. S. Navy			455.0	55.0	20.6			Los Angeles, Calif.	Ballast	3,465	5,526	4,066
Neches	17	14-10	19	11-45	19	18-30	20	00-39					American	U. S. Navy			455.0	55.0	20.6			Los Angeles, Calif.	Ballast	3,465	5,526	4,066

* Tanker. * Motor ship.

St. Michel	19	2 25	19	15 05	19	21 35	American	U. S. Army	436.0	58.0	24.3	Brooklyn, N. Y.	Balboa, C. Z.	General	361
Santa Rita	19	15 25	20	6 00	20	13 41	1 29	Grace Line	270.5	53.2	21.0	New York, N. Y.	Valparaiso, Chile	General	1,364
Durazo	17	13 55	20	8 55	20	13 49	20	Hamburg-American Line	327.0	54.0	14.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	300
Picomayo	17	20 20	6 15	20	14 56	20	16 05	Chilean Government	285.8	48.2	11.0	Greenock, England	Talcahuano, Chile	Ballast	2,348
Monroville	20	1 35	20	7 25	20	14 47	20	Imperial Oil Co.	510.0	68.0	24.0	Montreal, Canada	Talara, Peru	Ballast	11,555
Shikisan Maru	20	5 40	20	7 20	20	15 59	20	Mitsui & Co.	400.0	53.0	15.0	Amsterdam, Holland	Los Angeles, Calif.	Ballast	6,598
Pacific	20	10 30	20	10 45	20	17 44	20	Dunson S. S. Line	410.0	54.2	22.0	Philadelphia, Pa.	Tacoma, Wash.	General	2,728
Hemlock	20	11 50	20	12 05	20	19 53	21	Canadian Transp. Co.	300.0	44.0	15.0	Port of Spain, B.W.I.	Vancouver, B. C.	General	4,423
Lycia	20	14 30	20	12 30	20	21 36	20	Amer-Hawaiian Line	434.3	57.7	19.0	Boston, Mass.	Portland, Oreg.	General	3,122
Georgian	20	14 30	20	12 30	20	22 58	American								7,983

³ Transport.

⁴ Dredge.

⁵ Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Yearby	13	19 30	14	6 28	14	14 40	14	16 00	British	Sir R. Romper & Co.	485.0	55.5	25.0	Victoria, B. C.	Dunkirk, France	Wheat	9,400
Gertrude	14	6 48	14	8 22	14	15 40	14	15 40	American	Spencer Kellogg & Son.	391.9	51.2	26.0	Manila, P. I.	New Orleans, La.	Coconut oil	6,700
Ponoma	14	13 00	15	14 14	14	22 10	14	23 35	American	Wyerbaeuser Timber.	390.0	56.0	27.0	Everett, Wash.	Baltimore, Md.	Lumber	9,000
Santa Elisa	14	13 00	15	6 20	15	13 22	16	10 10	American	Crace Line	390.3	51.0	23.1	Valparaiso, Chile	New York, N. Y.	General	3,150
San Marcos	15	3 45	15	7 24	15	14 35	15	14 35	American	Quaker Line	410.5	54.0	25.0	Portland, Oreg.	Philadelphia, Pa.	Lumber	7,326
Erft	15	6 00	15	7 24	15	16 00	16	4 15	German	North German Lloyd	390.6	50.7	22.0	Valparaiso, Chile	Hamburg, Germany	General	4,672
Loriga	15	3 13	15	8 38	15	16 10	16	10 10	British	Pacific Steam Nav. Co.	406.0	54.2	27.0	Corral, Chile	Hull, England	General	7,390
Sacramento	15	11 13	15	11 13	15	18 10	15	22 10	American	U. S. Navy	224.0	40.0		Balboa, C. Z.	Cristobal, C. Z.	Cruiser	
Eisenach	15	12 00	15	12 24	15	18 45	15	18 45	German	North German Lloyd	359.3	50.8	14.0	Champerico, Guat.	New Orleans, La.	Ballast	4,814
Canadian	15	16 10	15	16 55	16	10 55	16	15 10	British	Can. Nat. Steamships	400.0	52.0	19.0	Brisbane, Australia	Montreal, Canada	General	3,203
Planet	15	18 15	15	19 18	16	11 30	16	11 50	German	Hamburg-American Line	450.7	57.2	25.5	Corral, Chile	Hamburg, Germany	General	8,056
El Cervo	15	18 00	16	6 12	16	14 15	16	14 15	British	Anglo-Ecuador. Offshells.	407.4	52.2	26.0	La Libertad, Ecu.	Philadelphia, Pa.	Crude oil	7,400
Rudby	16	8 45	16	9 37	16	17 40	16	19 30	British	Sir R. Romper & Co.	390.0	55.0	24.0	Victoria, B. C.	Havre, France	Wheat	7,957
Solana	16	12 30	16	13 16	16	21 05	16	21 05	American	Tidewater Oil Co.	419.5	55.5	27.0	San Francisco, Cal.	New York, N. Y.	Gasoline, lub. oil	9,520
Robert	16	15 10	16	15 56	16	23 05	17	1 00	American	Lukenbaeth Line	445.0	58.0	27.0	Portland, Oreg.	Boston, Mass.	Lumber, general	8,976
Carl Legten	16	16 25	16	17 15	17	11 45	17	14 55	German	Hamburg-American Line	409.8	53.9	22.2	Valparaiso, Chile	Hamburg, Germany	General	6,110
Pacific	16	17 00	16	18 40	17	10 55	17	10 55	British	Furness, Withy & Co.	435.0	60.1	28.0	Vancouver, B. C.	Glasgow, Scotland	General	8,265
Neches	16	18 15	17	6 17	17	14 10	17	14 15	American	U. S. Navy	425.0	56.2	25.0	Los Angeles, Calif.	Cristobal, C. Z.	Grain	7,000
Kurdistan	16	19 30	17	6 42	17	14 15	17	14 15	British	Common Brothers	420.0	54.0	25.0	Vancouver, B. C.	Antwerp, Belgium	Grain	8,720
Hindpool	17	1 00	17	7 25	17	15 45	17	15 45	British	Sir R. Romper & Co.	405.0	54.0	24.0	Vancouver, B. C.	Palmouth, Eng.	Wheat	7,556
Nevadan	17	8 15	17	8 55	17	15 45	17	15 45	American	Amer-Hawaiian Line	460.0	57.8	21.0	San Francisco, Cal.	Boston, Mass.	General	8,478
Dorothy Cahill	17	9 30	17	10 06	17	17 30	17	18 10	American	Arrow Line	410.0	54.2	24.0	Portland, Oreg.	New York, N. Y.	Lumber	6,994
Salinas	16	15 33	17	10 20	17	17 10	17	18 10	American	U. S. Navy	477.1	60.0	29.0	Los Angeles, Calif.	Guantanamo Bay	Fuel oil	10,927
Mummysie	17	11 10	17	12 03	17	19 40	17	19 40	American	Munson, McCork Line	400.7	54.2	24.0	Tacoma, Wash.	Baltimore, Md.	General, lumber	6,842
Tacoma City	17	17 55	17	18 39	18	12 25	18	12 25	British	Reardon Smith Line	400.4	54.2	25.0	N. Westminster, B. C.	Liverpool, England	General	7,785
President	17	20 00	17	20 41	18	12 30	18	14 50	American	Dollar Line	516.5	72.2	29.4	Manila, P. I.	New York, N. Y.	General	4,038
Lagarto	18	2 00	18	6 44	18	14 10	18	23 25	British	Pacific Steam Nav. Co.	385.6	52.2	26.0	Talcahuano, Chile	Liverpool, England	General	6,109
Nosa Chief	18	4 35	18	7 35	18	14 20	18	22 45	American	N. O. & S. A. S. Co.	299.4	50.0	22.0	Valparaiso, Chile	Pensacola, Fla.	General	3,367
Chilcoop	18	8 40	18	9 47	18	17 30	18	21 45	American	Hoelschid & Co.	411.5	54.1	23.0	New York, N. Y.	New York, N. Y.	Copper ore	7,500
Cali	18	9 45	18	10 25	18	17 40	18	21 45	German	Roland Line	217.0	33.0	13.0	Guayaquil, Ecuador	Cristobal, C. Z.	General	826
Jelling	18	10 18	18	12 16	18	19 55	22	10 35	Danish	Anglo-Mexican Oil Co.	285.6	42.2	19.0	Anacortes, Wash.	Tampico, Mexico	Shocks, lumber	2,424

⁶ Motor ship.

⁷ For orders.

⁸ Tanker.

⁹ Beans, nitrates, and coffee.

¹⁰ Fuel oil and gasoline.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Timavo.	18	13 10	18	13 46	18	21 25	Italian	Nav. Libera Triestina.	464 1	57.4	26.0	Vancouver, B. C.	Genoa, Italy.	General.	8,011	8,423
Forteford ¹⁰ .	18	6 30	18	15 05	18	23 15	Norwegian.	Canadian Transp. Co.	378 8	30.2	27.0	Vancouver, B. C.	London, England.	Wheat, general.	6,917	5,806
Cauca ¹⁰ .	18	15 10	18	15 39	18	23 05	Colombian.	National Navigation Co.	107 0	22.9	9.0	Buenaventura, Col.	Cristobal, C. Z.	General. (14)	174	262
Sanyo Maru ¹⁰ .	18	18 40	18	19 15	19	15 47	Japanese	Osaka Shosen Kaisha.	446 0	60.5	26.0	Shanghai, China.	New York, N. Y.	General.	5,942	8,942
Heinrich V.	18	15 00	19	6 05	19	14 00	Danzig.	W. Tankerschiff Rhederei	521 1	70.2	30.0	Talara, Peru.	Valloe, Norway.	(14)	15,749	12,535
Riedemann ¹⁰ .	18	16 10	19	6 30	19	15 35	Japanese	Nippon Yusen Kaisha.	445 0	58.0	27.0	Baltimore, Md.	Baltimore, Md.	(14)	8,721	7,955
Tsuyama Maru.	18	20 00	19	7 09	19	15 35	American.	Williams S. S. Corp.	410 0	52.2	28.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	7,461	6,821
San Felipe.	18	20 00	19	7 09	19	15 35	American.	Williams S. S. Corp.	410 0	52.2	28.0	Seattle, Wash.	Baltimore, Md.	Lumber, general.	7,461	6,821
Acajula.	19	4 00	19	8 05	19	16 15	British.	Pacific Steam Nav. Co.	215 7	33.6	17.0	Champerio, Guat.	Cristobal, C. Z.	(14)	965	1,273
Invella.	19	3 30	19	8 20	19	16 55	British.	Canadian American Co.	400 0	52.0	26.0	Vancouver, B. C.	London, England.	Lumber, general.	7,500	5,665
Orari ¹⁰ .	19	3 10	19	10 12	19	17 50	British.	N. Z. Shipping Co.	489 5	67.0	25.0	Guaymas, N. Z.	London, England.	Frozen, general.	4,151	12,792
Buenaventura.	19	15 50	19	18 30	20	17 45	American.	Panama R. R. S. S. Line	251 0	43.0	17.0	Guaymas, N. Z.	New York, N. Y.	General.	1,199	2,873
Laurits.	19	18 40	19	19 10	20	11 15	Norwegian.	Fred Olsen & Co.	435 9	56.2	26.0	Vancouver, B. C.	Oslo, Norway.	General.	8,000	7,963
Swenson ¹⁰ .	19	23 30	20	6 36	20	15 30	American.	Richfield Oil Co.	500 0	71.2	30.0	Los Angeles, Calif	New York, N. Y.	Gasoline.	15,147	11,667
Tamishua ¹⁰ .	19	23 30	20	6 36	20	15 30	American.	U. S. Navy.	500 0	71.2	30.0	Los Angeles, Calif	New York, N. Y.	Gasoline.	15,147	11,667
S-48 ¹¹ .	20	8 00	20	6 55	20	14 05	American.	North German Lloyd	469 0	58.0	24.1	Valparaiso, Chile.	Cristobal, C. Z.	General.	6,415	7,743
Goslar.	20	8 00	20	9 40	20	18 30	German.	North German Lloyd	469 0	58.0	24.1	Valparaiso, Chile.	Bremen, Germany	General.	6,415	7,743
F. J.	20	12 45	20	13 25	20	21 00	American.	Imperial Oil Co., Ltd.	448 0	56.0	24.0	Seattle, Wash.	New Orleans, La.	General.	4,853	8,508
Luckenbach.	20	13 00	20	16 05	21	11 35	British.	Imperial Oil Co., Ltd.	521 5	70.4	31.0	Talara, Peru.	Crude, fuel oil.	Crude, fuel oil.	16,500	12,339
Calgarotte ¹⁰ .	20	13 00	20	16 05	21	11 35	British.	Imperial Oil Co., Ltd.	521 5	70.4	31.0	Talara, Peru.	Crude, fuel oil.	Crude, fuel oil.	16,500	12,339

¹⁰ Tanker.¹¹ Submarine.¹² Gold, platinum, and general.¹³ Crude oil and naphtha.¹⁴ Sugar, molasses, etc.¹⁵ Coffee, hides and general.

PORT OF CRISTOBAL.

Date.	Vessel.	ARRIVALS.		DEPARTURES.	
		Line.	Date.	Vessel.	Line.
June 15.	Darien C-35 ¹⁶ .	Scandia Airplane Co.	June 14.	No. 300-M ¹⁶ .	Pan American-Grace Airways
June 15.	C. C. Arne ¹⁷ .	R. Foster	June 14.	No. 9685 ¹⁶ .	Pan American Airways
June 16.	Zacapa.	United Fruit Co.	June 14.	No. 8817 ¹⁶ .	Pan American Airways
June 16.	Magafanes.	Spanish Line	June 14.	No. 668-M ¹⁶ .	Pan American Airways
June 16.	Davision.	Leeward S. S. Line.	June 14.	Orisco.	Hamburg-American Line
June 16.	Amapaquina ¹⁸ .	A. Tagaropoulos	June 15.	Nos. 9688 ¹⁶ .	Royal Netherlands S. S. Co.
June 16.	Ancon.	A. Tagaropoulos	June 17.	No. 9688 ¹⁶ .	Pan American Airways
June 17.	Pastores.	United Fruit Co.	June 17.	No. 669-M ¹⁶ .	Pan American Airways
June 17.	Air mail carrier.	Schooner.	June 17.	Anaducuma ¹⁸ .	A. Tagaropoulos

¹⁶ Other than ships passing through the Canal.¹⁷ Motor boat.¹⁸ Motor boat.

PORT OF CRISTOBAL.—Continued.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
June 17	Tela	United Fruit Co.	New Orleans, La.	June 17	Inapaquina ²²	A. Tagaropulos	Colon, Rep. of Panama.
June 17	No. 667-M ¹⁹	Pan American Airways	Miami via wayports.	June 17	Zacapa	United Fruit Co.	New York via Kingston.
June 18	Bolivar	Colombian S. S. Line	New York via wayports.	June 17	Davision	Leyland S. S. Line	Pastellillo, Cuba.
June 18	Atlantida	Standard Fruit & S. S. Co.	New Orleans via Habana.	June 18	Pastores	United Fruit Co.	Colombian ports.
June 19	Calamares	United Fruit Co.	New York via Habana.	June 18	Tela	United Fruit Co.	Port Limon, Costa Rica.
June 19	Cavina	Elders & Fyffes	Avonmouth via wayports.	June 19	Bolivar	Colombian S. S. Line	New York via Kingston.
June 19	Costarica	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	June 19	Cavina	Elders & Fyffes	Avonmouth via wayports.
June 19	Canden	United Fruit Co.	Curacao, D. W. I.	June 19	Pearl Marie ²¹	G. I. Bryan	Bluefields, Nicaragua.
June 19	Asicillo ²⁰	U. S. Navy	Cartagena, Colombia.	June 19	Calamares	United Fruit Co.	New York via wayports.
June 19	Pearl Marie ²¹	G. I. Bryan	Colon, Rep. of Panama.	June 19	Darien C-35 ¹⁹	Scadta Airplane Co.	Barranquilla and waypts.
June 19	Carmelita ²²	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 20	Magallanes	Spanish S. S. Line	Barcelona via wayports.
June 20	Annetta I. ²²	P. W. Hamilton	Colon, Rep. of Panama.	June 20	Atlantida	Standard Fruit & S. S. Co.	New Orleans and wayports.
June 20	Tela	United Fruit Co.	Port Limon, Costa Rica.	June 20	Carmelita ²¹	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
June 20	No. 9664 ¹⁹	Pan American Airways	San Salvador and waypts.	June 20	Annetta I. ²²	P. W. Hamilton	Colon, Rep. of Panama.
June 20	No. 668-M ¹⁹	Pan American Airways	Miami via wayports.	June 20	Canden	United Fruit Co.	Curacao via Bocas.
June 20	No. 144-M ¹⁹	Pan American-Grace Airways	Pimental via wayports.	June 20	Tela	United Fruit Co.	New Orleans, La.
¹⁹ Air mail carrier. ²⁰ Gunboat. ²¹ Motor schooner. ²² Motor boat.				PORT OF BALBOA.			
June 17	Suriname	United Fruit Co.	San Francisco, Calif.	June 18	Suriname	United Fruit Co.	San Francisco, Calif.
June 19	Dos Hermanos ²³	A. Valdez	Panama Bay, R. P.	June 19	Dos Hermanos ²³	A. Valdez	Panama Bay, R. P.
June 19	A. B. Obarrío ²³	A. Valdez	Panama Bay, R. P.	June 19	A. B. Obarrío ²³	A. Valdez	Panama Bay, R. P.
June 19	Nueva Panama ²⁴	Hans Elliott	Panama Bay, R. P.	June 19	Nueva Panama ²⁴	Hans Elliott	Panama Bay, R. P.
June 19	Sambu ²³	Hans Elliott	Panama Bay, R. P.	June 19	Sambu ²³	Hans Elliott	Panama Bay, R. P.
June 19	Real ²³	Hans Elliott	Panama Bay, R. P.	June 19	Real ²³	Hans Elliott	Panama Bay, R. P.
June 20	La Brea ²⁵	Union Oil Co. of Calif.	Los Angeles, Calif.	June 21	La Brea ²⁵	Union Oil Co. of Calif.	Los Angeles, Calif.
²³ Tanker. ²⁴ Motor schooner. ²⁵ Motor ship.				* Other than ships passing through the Canal.			

"Belgenland" Cruise Canceled.

Advice has been received by The Panama Canal from the local agent of the American Express Co. that the cruise of the Red Star liner *Belgenland*, scheduled to pass through the Canal on December 23, 1931, has been canceled. This would have been the eighth annual cruise of this ship around the world, passing through the Canal on each voyage.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending June 13, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. S. S. Line.....		June 7.....		716
City of Panama.....	Panama Mail S. S. Co.....		June 7.....		15
San Rafael.....	Quaker S. S. Line.....	June 7.....	June 8.....	66	(²)
Santa Clara.....	Grace Line.....	June 8.....	June 8.....	540	82
Pearl Marie.....	R. Feuillebois.....	June 8.....	June 8.....	(¹)	33
Europa.....	Danish East Asiatic Co.....	June 8.....	June 8.....	$\frac{1}{2}$	(²)
Wiegand.....	North German Lloyd.....	June 8.....	June 9.....	220	29
Zenon.....	French Line.....	June 8.....	June 9.....	662	143
Cuba.....	French Line.....	June 8.....	June 10.....	93	1,130
Orinoco.....	Hamburg-American Line.....	June 9.....	June 9.....	69	13
Wisconsin.....	French Line.....	June 9.....	June 9.....	29	89
Orestes.....	Royal Netherlands S. S. Co.....	June 9.....	June 10.....	130	22
Sixaola.....	United Fruit Co.....	June 9.....	June 10.....	44	519
Esfuerso.....	J. Asmussen.....	June 9.....	June 13.....	70	30
Salvador.....	Pacific Steam Navigation Co.....		June 10.....		918
Cauca.....	National Navigation Co.....		June 10.....		69
Aconcagua.....	Chilean S. S. Line.....	June 10.....	June 10.....	35	(²)
Australien.....	Danish East Asiatic Co.....	June 10.....	June 11.....	21	(²)
Lautaro.....	Pacific Steam Navigation Co.....	June 10.....	June 11.....	32	25
Orbita.....	Pacific Steam Navigation Co.....	June 10.....	June 11.....	27	(²)
Ecuador.....	Panama Mail S. S. Co.....	June 10.....	June 11.....	1,177	13 $\frac{1}{2}$
Iriona.....	United Fruit Co.....	June 10.....	June 11.....	1,681	(³)
San Mateo.....	United Fruit Co.....	June 10.....	June 12.....	1,065	(²)
Zacapa.....	United Fruit Co.....	June 10.....	June 11.....	521	456
Santa Barbara.....	Grace Line.....	June 11.....	June 11.....	398	124
Manizales.....	Roland Line.....		June 11.....		365
Durazzo.....	Hamburg-American Line.....	June 11.....		436	
Oakland.....	Hamburg American Line.....	June 11.....	June 11.....		383
Knute Nelson.....	Fred Olsen & Co.....	June 11.....	June 11.....	(¹)	131
Bridgetown.....	Colombian S. S. Line.....	June 11.....	June 12.....	84	19
Kinderdijk.....	Holland-American Line.....	June 11.....	June 12.....	(¹)	104
Ulua.....	United Fruit Co.....	June 12.....	June 12.....	258	270
Caldas.....	National Navigation Co.....	June 12.....		239	
Cefalu.....	Standard Fruit & S. S. Co.....	June 12.....	June 13.....	186	255
Wyoming.....	French Line.....	June 12.....	June 13.....	127	380
Baralt.....	Royal Netherlands S. S. Co.....	June 12.....		420	
City of Panama.....	Panama Mail S. S. Co.....	June 12.....	June 13.....	197	514
Costa Rica.....	Royal Netherlands S. S. Co.....	June 13.....		55	
Rialto.....	Navigazione Libera Triestina.....	June 13.....	June 13.....	37	
Orinoco.....	Hamburg-American Line.....	June 13.....		14	
Iriona.....	United Fruit Co.....	June 13.....	June 13.....	12	691
Guayaquil.....	Panama R. R. S. S. Line.....	June 13.....		912	

¹ No cargo discharged² No cargo laded.³ Three cases.
Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 20, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
President Polk.....	Dollar Line.....	June 12.....	June 12.....		10
Suriname.....	United Fruit Co.....	June 17.....	June 19.....	284	25
Tsuyama Maru.....	Nippon Yusen Kaisha.....	June 18.....	June 19.....	170	
Fordefjord.....	Canadian Transport Co.....	June 18.....	June 18.....	223	
Patricia.....	Hamburg-American Line.....	June 19.....	June 20.....	294	
Pennsylvania.....	Panama-Pacific Line.....	June 19.....	June 20.....		179
President Grant.....	Dollar Line.....	June 19.....	June 19.....	1	7
Santa Rita.....	Grace Line.....	June 20.....	June 20.....	49	10
La Brea.....	Union Oil Co.....	June 20.....	June 21.....	11,083	23

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Volume XXIV.

Balboa Heights, C. Z., July 1, 1931.

No. 48.

Canal Traffic During Fiscal Year 1931.

The total number of commercial vessels transiting the Canal during the fiscal year ended June 30, 1931, aggregated 5,529, and the total tolls collection was \$24,645,456.57. Commercial traffic for the fiscal year 1931, was the lowest year's traffic since the fiscal year 1927, when 5,475 vessels, paying \$24,228,830.11 in tolls, were passed through. In comparison with the fiscal year 1930, the past year's traffic shows a decrease of 656 in transits and \$2,431,433.44 in tolls (10.6 per cent and 9.0 per cent, respectively), and in comparison with 1929, a decrease of 884 in transits and \$2,481,920.34 in tolls (13.8 per cent and 9.1 per cent, respectively). The tolls figures are the amounts collected and are subject to minor adjustments on account of overcharges or supplemental bills.

The daily average number of commercial transits during the year was 15.15, as compared with 16.95 for the fiscal year 1930, and 17.57 for the fiscal year 1929. The daily average tolls collection amounted to \$67,521.80, as compared with \$74,183.26 for 1930 and \$74,321.58 for 1929.

In the following tabulation, the number of commercial transits and the amount of tolls collected are shown for the fiscal year 1931, with the averages of transits and tolls, together with the totals for the years 1930 and 1929:

	Total for month.		Daily averages.	
	Transits.	Tolls.	Transits.	Tolls.
July.....	488	\$2,180,511.82	15.74	\$70,339.09
August.....	465	2,080,230.42	15.00	67,104.21
September.....	458	2,057,103.58	15.26	68,570.12
October.....	517	2,288,982.08	16.68	73,838.13
November.....	479	2,098,357.36	15.96	69,945.25
December.....	495	2,192,583.85	15.97	70,728.51
Total, first 6 months.....	2,902	12,897,769.11	15.77	70,096.57
January.....	476	2,108,140.42	15.35	68,004.53
February.....	431	1,915,902.78	15.39	68,425.10
March.....	430	1,964,434.22	14.16	63,368.85
April.....	453	2,014,349.13	15.10	67,144.97
May.....	428	1,923,452.18	13.81	62,046.84
June.....	400	1,821,408.73	13.33	60,713.62
Total, last 6 months.....	2,627	11,747,687.46	14.51	64,904.35
Total, fiscal year, 1931.....	5,529	24,645,456.57	15.15	67,521.80
Total, fiscal year, 1930.....	6,185	27,076,890.01	16.95	74,183.26
Total, fiscal year, 1929.....	6,413	27,127,376.91	17.57	74,321.58

Canal Traffic in June, 1931.

During the month of June, 1931, 400 commercial vessels and 5 small launches transited the Canal. Tolls on the commercial vessels aggregated \$1,821,408.73, and on the launches \$27.73, or a total tolls collection of \$1,821,436.46.

The daily average number of commercial transits for the month was 13.33, and the average tolls collection \$60,713.62, as compared with an average of 13.81 transits and \$62,046.84 in tolls for the previous month, and an average of 15.93 transits and \$70,033.15 in tolls for June, 1930. The average amount of tolls paid by each of the commercial transits was \$4,553.52, as compared with \$4,395.39 for the month of June, 1930. Commercial traffic for the past month was the lowest since October, 1925, when 388 vessels were transited.

New Motor Ship "Europa" Lands Passengers to Obtain Ballast Rate.

The new combination passenger and freight motor ship *Europa*, of the East Asiatic Company, Danish operators, arrived at Cristobal on the morning of June 8, 1931, on her maiden voyage in the trade between Europe and the west coast of North America. She transited the Canal the same day and cleared Balboa the following day for Vancouver, via Puerto Armuelles, Los Angeles, and San Francisco. At the time of arrival the vessel had 14 passengers in transit and 2 tons of cargo for Cristobal. The passengers, with their baggage, were debarked at Cristobal and crossed the Isthmus by train, reboarding the vessel at Balboa. This procedure gave the vessel the benefit of the ballast rate as she had neither passengers nor cargo while making actual transit. The saving to the vessel in making the transit in ballast was \$1,265.75. Tolls for transit laden would have been \$7,223.75 and those paid for ballast transit were \$5,958.

The *Europa* is 465 feet long by 62 feet beam, and has a deadweight capacity of 10,850 tons. She is a sister ship of the *Amerika* which made her initial voyage through the Canal on this run in May, 1930.

With the addition of the new vessel, the East Asiatic Company has a fleet of 10 vessels in the Europe-west coast North America trade, as follows: *Europa*, *Amerika*, *Asia*, *Australien*, *Tongking*, *Chile*, *Annam*, *Panama*, *Denmark*, and *Siam*.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT.

BALBOA HEIGHTS, C. Z., June 25, 1931.

No. 904.

Colombia, north coast, Cartagena approach, Tesoro Island Light again normal. The following is quoted from the daily memorandum of the U. S. Hydrographic Office, dated Washington, D. C., June 16, 1931:

The second officer of the American S. S. *Guatemala* reports that Tesoro Island Light was observed to be functioning normally on the morning of April 25 and again on the morning of May 18, 1931.

Approximate position: Lat. 10° 14' 10" N., long. 75° 44' 50" W.

H. BURGESS.

Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,

BALBOA HEIGHTS, C. Z., June 26, 1931.

No. 907.

Colombia, Buenaventura River, Buenaventura, wreck marking light established. The following is quoted from the daily memorandum of the U. S. Hydrographic Office, dated Washington, D. C., June 13, 1931:

The master of the motor ship *Konigsberg* reports that a flashing white light, period 3 seconds, flash 0.4 second, eclipse 2.6 seconds, has been placed on the mast of the S. S. *Tritonia*, which was sunk in (approximately) latitude 3° 52' 30" N., longitude 77° 06' 00" W.

H. BURGESS,

Governor.

Chilean Line to Withdraw Vessels from New York-Valparaiso Service.

The Compania Sud-Americana de Vapores (Chilean Line), operator of a passenger and cargo service between New York and Valparaiso, via the Panama Canal, is to discontinue this service with the southbound voyage of the *Aconcagua* which is due to pass through the Canal on her homeward voyage on July 3. The withdrawal of these vessels was deemed necessary on account of depressed business conditions, but the service is to be resumed when conditions improve.

The Chilean Line's service between Valparaiso and New York was inaugurated in 1920 with the *Renaico*, which the company had purchased from the Toyo Kisen Kaisha, in whose service she was known as the *Nippon Maru*. In 1922 the new *Aconcagua*, a passenger and cargo vessel built especially for this service, was added to the run, and early in 1923 her sister ship *Teno* was inducted into the service. These two vessels have been operating continuously since that time over this route, offering one sailing monthly in each direction.

The Chilean Line has been identified locally since 1890, in which year it began operating a service between Valparaiso and the Isthmus. At the time of the extension of its service to New York in 1922, it was one of the principal transshipping lines passing through the Canal to Cristobal.

Two other vessels were withdrawn some time ago from the New York-South American service because of depressed conditions—the *Ebro* and *Essequibo* of the Pacific Steam Navigation Co.

Panama Mail Line Revises Schedule.

The Panama Mail Steamship Line, operator of five passenger and cargo vessels in the coast to coast service, via Colombian, Central American, and Mexican ports, has announced a revision of its schedule of sailings in order to synchronize Canal Zone tourist connections with the north and southbound sailings of the vessels of the Grace fleet, and to speed up the New York, California, and South American passenger traffic.

Under the new layout, passengers sailing from New York to Central America, Mexico, and California, may sail two days later than the sailing date of the Panama Mail vessels, on vessels of the line's parent company, the Grace Line, and connect with the Panama Mail liners at the Canal. Passengers from California, Mexico, and Central America may transship at the Panama Canal to the South American vessels of the Grace fleet, call at Habana, and arrive in New York four days earlier than was possible under the old arrangement.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 22, 1931.

No. 903.

Colombia, west coast, Buenaventura River entrance, Palmas Island Light, latest information.

1. The first officer of the American S. S. *Buenaventura* reports that on June 17, 1931: Palmas Island Light was showing one flash every 9 seconds; flash 0.5 second, eclipse 8.5 seconds.
2. He reports further that the following statement was made by the Captain of the Port of Buenaventura:

The change in the characteristic of Palmas Island Light was caused by the breakage of part of the revolving mechanism of the light which has since been sent to the United States to be repaired and as soon as it is returned the original characteristic of the light will be restored.

Approximate position: 3° 53' 28" N., 77° 22' 12" W.

3. This notice supersedes all former notices regarding this light.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.
Week ending at midnight, June 27, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Salt water draft.		From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.				Beam.	Water draft.			Nature.	Tons.	Gross.	Net.
Colombia.....	20	1 20	21	6 05	21	12 31	American.	Panama Mail S. S. Co.	380.0	48.7	22.3	New York, N. Y.	San Francisco, Cal.	Coffee, general.	2,637	6,015	4,281
Alabama.....	20	4 25	21	6 00	21	13 11	French.	French Line	424.0	34.0	19.0	Havre, France.	Corral, Chile.	General.	1,835	7,428	5,167
Freemantle ¹	20	23 10	21	7 30	21	13 38	British.	Com'lth & Dom. Line.	477.0	63.0	20.3	London, England.	Bluff, N. Z.	General.	2,492	10,652	7,704
Baron Ramsay.....	21	2 00	21	7 30	21	14 43	British.	H. Hogarth & Sons	360.0	50.2	12.9	Cardiff, S. C.	Arica, Chile.	Ballast.	4,297	3,061	
Hegira.....	21	11 30	21	11 50	21	18 47	American.	Hegira S. S. Co.	440.0	56.0	21.0	Baltimore, Md.	Seattle, Wash.	Seed, general.	5,052	8,353	6,113
Willpola.....	21	14 30	21	14 45	21	21 30	American.	Williams S. S. Line	386.8	52.2	20.0	Baltimore, Md.	Seattle, Wash.	Coal, general.	3,973	5,680	4,080
J. W. Van Dyke ²	21	17 20	21	19 45	22	9 31	American.	James B. Berry & Sons.	364.0	51.0	21.0	Providence, R. I.	Los Angeles, Calif.	Ballast.	5,174	3,523	
Bromley ²	22	6 15	22	6 45	22	13 20	Norwegian.	Amer. Ref'g & Sm'g Co.	380.5	54.7	20.0	Botwood, N. F.	San Francisco, Cal.	Lead concentrate	4,765	6,447	4,757
Greytoko.....	22	6 45	22	7 20	22	14 24	British.	Barber S. S. Line	428.0	56.0	22.8	New York, N. Y.	Shanghai, China.	General.	3,049	7,596	5,179
Hendonball.....	22	6 30	22	7 45	22	15 05	British.	Inter. Freight Co.	399.6	53.0	19.0	New York, N. Y.	Corral, Chile.	General.	1,200	5,852	4,112
Amsterdam.....	22	6 40	22	8 30	22	16 28	Dutch.	Royal Neth. S. S. Co.	473.5	65.6	18.6	Amsterdam, Holl'd	Pisagua, Chile.	Ballast.	11,638	7,744	
Gregalia.....	22	5 40	22	10 10	22	16 56	British.	Donaldson Brothers.	425.0	56.0	18.8	Glasgow, Scotland	Vancover, B. C.	(⁴)	532	7,827	5,442
White Shadow.....	22	10 10	22	10 10	22	20 08	American.	E. Hope Norton	77.7	22.2	9.0	Colon, R. P.	Balboa, C. Z.	Towing launches	98	55	
Froquois.....	22	6 00	22	10 40	22	17 43	American.	Clyde-Mallory Lines	394.0	62.2	20.8	New York, N. Y.	Wilmington, Calif.	Ballast.	6,601	4,648	
Designar.....	21	17 00	22	13 05	22	20 20	British.	T. & J. Harrison	419.8	54.6	10.10	Liverpool, England	Williams Hd., B. C.	General.	1,504	7,819	6,101
Beaun.....	22	1 55	22	14 08	22	21 20	Dutch.	Royal Neth. S. S. Co.	400.0	58.3	18.10	Hamburg, Germany	Corral, Chile	General.	2	2	
Orca ⁴	22	10 10	22	10 10	22	20 08	American.	E. Hope Norton	.....	.....	.....	Colon, Rep. de P.	Balboa, C. Z.	Ballast.	2	2	
Manta ⁴	22	10 10	22	10 10	22	20 08	American.	E. Hope Norton	.....	.....	.....	Colon, Rep. de P.	Balboa, C. Z.	Ballast.	2	2	
George Washington ²	22	17 30	23	6 00	23	14 05	Norwegian.	Fred Olsen & Co.	425.5	55.3	21.0	Antwerp, Belgium.	Vancover, B. C.	(⁹)	5,363	7,553	5,673
Sutherland.....	23	5 00	23	6 20	23	14 48	American.	Nelson Line	380.0	53.2	17.6	New York, N. Y.	Seattle, Wash.	General.	1,991	5,654	4,123
Oakbank ²	23	5 20	23	7 20	23	15 05	British.	Andrew Weir & Co.	420.0	53.9	14.0	Philadelphia, Pa.	Mauru, Australia	Ballast.	7,098	5,017	
Triglav.....	23	6 30	23	7 15	23	15 48	Yugoslav.	Chilean Nit'ne Producers	425.0	58.2	16.0	Rotterdam, Holl'd	Chile.	Ballast.	7,731	5,759	
Democracy.....	23	6 35	23	8 30	23	16 58	American.	Nelson Line	377.9	52.0	24.6	Freeport, Tex.	San Francisco, Cal.	Sulphur, asbestos	6,878	5,434	3,969
Point.....	23	8 35	23	8 50	23	16 18	American.	Swayne & Hoyt.	324.0	46.2	20.0	Corpus Christi, Tex.	Seattle, Wash.	General.	2,891	3,984	2,612
San Lucas.....	23	11 25	23	9 45	23	17 12	American.	Pacific-Atlantic S. S. Co.	415.0	55.6	16.7	New York, N. Y.	Tacoma, Wash.	General.	2,663	7,643	5,720
Mexican.....	23	10 35	23	11 00	23	17 47	American.	Amer-Hawaiian Line	472.3	57.2	17.3	Boston, Mass.	Tacoma, Wash.	General.	1,349	9,258	6,944
Gesbia.....	23	15 10	24	6 07	24	13 08	Norwegian.	Knut Knutsen, O. A. S.	375.8	57.0	22.0	Oslo, Norway	Corral, Chile	General, cattle.	4,188	5,681	3,925
Baldhill ¹	23	22 55	24	6 25	24	13 33	American.	Shell Eastern Pet. Prod.	416.0	56.0	15.6	Perth Amboy, N. J.	Los Angeles, Calif.	Ballast.	5,681	6,721	4,680
K. I. Luckenbach.....	24	1 50	24	7 25	24	14 45	American.	Luckenbach Line.	446.0	56.0	22.6	Perth Amboy, N. J.	Seattle, Wash.	General.	4,403	8,552	6,236
Christy.....	24	3 45	24	7 40	24	15 30	American.	Standard Shipping Co.	477.9	60.0	22.0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast.	.....	8,501	5,948
Payne ¹	24	5 30	24	8 20	24	15 35	American.	Calmar S. S. Corp.	385.3	51.2	19.10	Baltimore, Md.	Seattle, Wash.	Steel, general.	3,945	6,224	4,465

¹ Tanker.

² Motor ship.

³ Yacht.

⁴ Launch.

⁵ General, coffee, and bricks.

⁶ Cement, iron, and general.

Real 7	23	14.30	24	13.15	24	21.05	Panamanian	Hans Elliott	62.0	17.6	5.0	Cristobal, C. Z.	Pedregal, R. P.	Lumber	46	46	22
Lieut. Col. H. C. Schumm			24	6.15	24	14.55	American	U. S. Army	98.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Q-2			24	6.15	24	14.55	American	U. S. Army				Cristobal, C. Z.	Balboa, C. Z.	Ballast			
Hawai Maru	25	8.20	25	8.35	25	15.34	Japanese	Oaska Shosen Kaisha	475.0	61.0	23.6	Buenos Aires, Arg.	Kobe, Japan	General	5,887.10	173	7,354
Lena Locken								Lockenbach Line	425.0	53.7	22.0	Houston, Texas	Seattle, Wash.	General	3,296	7,217	5,295
Emil Kirdorf	25	8.35	25	14.34	25	22.06	German	Hamburg-American Line	410.0	54.0	17.0	Hamburg, Germany	Valparaiso, Chile	General	1,044	7,141	5,468
Arnesa								United Fruit Co.				Cristobal, C. Z.	Gatun, C. Z.	Towing barge			8
No. 4849								United Fruit Co.				Cristobal, C. Z.	Gatun, C. Z.	General		106	106
Santa Clara	25	11.30	26	6.15	26	13.14	American	Grace Line	483.3	63.9	25.4	New York, N. Y.	Talcahuano, Chile	General	1,761.11	680	7,442
Gen. M. H. Sherman								Sudden & Christensen	402.6	53.0	18.7	Baltimore, Md.	Seattle, Wash.	General	3,070	6,575	4,912
President Adams	26	5.30	26	7.15	26	14.09	American	Dollar Line	502.0	62.2	25.0	New York, N. Y.	Around the world	General	2,272.12	512	9,178
Romney	26	7.05	26	7.30	26	14.46	British	Anglo-Chilean Nite Co.	420.0	57.0	14.6	Port Said, Egypt	Arica, Chile	Ballast		6,983	5,140
City of Vancouver								Vancouver S. S. Co.	410.0	54.0	22.6	Antwerp, Belgium	Vancouver, B. C.	General	6,025	6,614	4,995
La Perla	26	9.45	26	10.00	26	17.12	British	United Fruit Co.	325.2	48.1	18.1	Cristobal, C. Z.	San Francisco, Cal.	Ballast		4,033	2,261
Hoyager	26	10.50	26	11.25	26	17.42	American	Interocean S. S. Co.	381.6	53.0	13.1	Batavia, Holland	Los Angeles, Calif.	Ballast		6,289	4,723
Memphis City	26	11.20	26	12.10	26	19.24	American	Isthmian S. S. Lines	424.0	56.2	26.2	Baltimore, Md.	Shanghai, China	Steel, general	8,245	7,611	5,450
Selma City	26	12.35	26	13.25	26	20.16	American	Isthmian S. S. Lines	424.0	56.0	26.4	Monterey, Cal.	Seattle, Wash.	General, steel	2,383	7,611	5,450
Tacoma	26	12.35	26	14.00	26	21.43	German	Hamburg-American Line	477.0	53.0	21.0	Hamburg, Germany	Seattle, Wash.	General	2,877.10	277	7,904
West Cape	26	16.40	26	18.10	27	9.18	American	McCormick S. S. Co.	409.0	43.0	18.0	Philadelphia, Pa.	Vancouver, B. C.	General	2,428	6,566	4,660
Baron Wemyss	27	3.30	27	6.10	27	13.25	British	Compania del Guano	332.0	48.0	14.0	Baltimore, Md.	Paña, Peru	Ballast		3,454	2,460
Otao	18	17.40	27	7.05	27	14.35	British	N. Z. Shipping Co.	472.0	67.0	24.9	Liverpool, England	Pt. Chalmers, N. Z.	General	5,458	13,016	9,415
Cal	26	19.30	27	9.35	27	16.46	German	Roland S. S. Line	216.5	32.0	12.6	Cristobal, C. Z.	Corral, Chile	General	3,305	7,221	4,844
Losada	27	4.40	27	10.50	27	17.10	British	Pacific Steam Nav. Co.	405.0	54.0	18.6	Hull, England	Vancouver, B. C.	General	3,095	7,476	5,585
Canada	27	4.40	27	10.50	27	18.09	Swedish	Johnson Line	427.0	56.0	20.0	Gothenburg, Sweden	Champerio, Guat	(19)	876	1,272	700
Acapulco	19	16.15	27	13.10	27	20.00	British	Pacific Steam Nav. Co.	215.7	33.6	16.0	Cristobal, C. Z.	Buenaventura, Col.	General	200	262	161
Cauca	18	23.05	27	14.15	27	21.15	Colombian	National Navigation Co.	107.0	22.0	11.6	Cristobal, C. Z.	Portland, Oreg.	General	3,048	8,567	6,020
Missourian	27	18.45	27	19.00	28	9.39	American	Amer-Hawaiian Line	445.0	59.8	19.5	Boston, Mass.		General			

* Ore, cement, and general.

* Barge.

* Tug.

* Motor boat.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Gambou	21	6.38	Panamanian	I. P. Foster	416.8	56.1	28.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	
Fortuna	21	6.38	Colombian	Cult-Pac. Redw'd Line	386.5	52.2	19.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast	(14)
Point Calea	21	15.45	22	11.40	22	11.40	22	Seattle, Wash.	New Orleans, La.	Lumber, general	(15)
Buffalo Bridge	21	17.00	21	17.34	22	11.45	22	Tacoma, Wash.	New York, N. Y.	Gasoline	(16)
Pennsylvania	21	21.00	22	6.46	22	14.05	22	Los Angeles, Calif.	Baltimore, Md.		
Thomas H.	21	23.00	22	7.24	22	14.55	22	Los Angeles, Calif.	New York, N. Y.	Gasoline, kero'ine	
Wheeler	21	4.30	22	8.24	22	16.45	22	Vancouver, B. C.	Cobb, I. F. S.	Wheat	
York City	22	8.45	22	9.24	22	17.35	22	Valparaiso, Chile	Hamburg, Germany	Nitrates, general	
Jason	22	9.25	22	10.30	22	18.15	22	Alachua, Chile	Liverpool, England	(17)	
Orduna	22	7.00	22	13.25	22	18.40	22	Talcahuano, Chile	New York, N. Y.	(18)	
Santa Maria	22	14.30	22	15.19	22	21.45	22	Portland, Oreg.	Boston, Mass.	General	
Kentuckian	22	14.30	22	15.19	22	21.45	22	Balboa, C. Z.	New York, N. Y.	Army supplies	(19)
St. Mibel											

11 Launch. 12 Motor ship. 13 For orders. 14 Towing launch Fortuna. 15 Lumber, sugar, and general. 16 Copper, ores, and general. 17 Tanker.

* Launch.

* Motor ship.

* For orders.

* Towing launch Fortuna.

* Lumber, sugar, and general.

* Copper, ores, cotton, and general.

* Copper, coffee, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Venezuela.....	22	10.30	23	6.36	23	14.15	24	9.05	American.	Panama Mail S. S. Co.	380.0	48.7	22.0	San Francisco, Cal.	New York, N. Y.	General.	1,964	6,033	4,353
Real ¹⁸	22	10.30	23	6.40	23	14.25	24	13.15	Panamanian.	Haus Elliott.	62.2	17.6	22.0	Panama Bay, B. C.	Cristobal, C. Z.	Bananas.	40	46	22
Vancouver.....	23	6.00	23	7.05	23	14.53	24	19.35	German.	Hamburg-American Line	471.5	63.1	27.0	Vancouver, B. C.	Hamburg, Germany	General.	8,079	10,267	7,252
Benjamin.....	22	17.30	23	7.36	23	15.10	23	15.10	American.	Shell Oil Co.	411.6	53.2	26.0	Los Angeles, Calif.	Wilmingon, N. C.	Gas kerosene.	9,000	6,228	4,487
Ferdia ¹⁸	22	21.00	23	8.44	23	15.50	23	15.50	Norwegian.	Fearnley & Eger.	382.7	53.4	26.3	Vancouver, B. C.	Avonmouth, Eng.	General.	7,370	6,112	4,284
J. L. Lucken- bach.....	22	22.15	23	9.13	23	16.15	23	16.15	American.	Luckenbach Line.	448.9	60.2	30.0	Portland, Oreg.	Boston, Mass.	General, lumber.	9,221	9,294	6,861
Tain Yin ¹⁸	22	16.20	23	9.28	23	17.10	23	17.10	Norwegian.	Barber S. S. Line.	441.4	69.9	23.0	Hollo, P.	New York, N. Y.	General.	5,519	9,607	7,063
Astrolabe.....	23	3.00	23	9.45	23	18.10	23	23.30	French.	Messageries Marit's Co.	351.0	52.5	23.0	Yonneau, N. Galed.	Dunkirk, France.	General, copra.	3,570	5,580	3,797
Paris City.....	23	5.50	23	10.15	23	18.40	23	18.40	British.	Nitrocell Grain, Ltd.	412.2	53.0	29.0	Vancouver, B. C.	Cobb, I. F. S.	Wheat.	8,953	6,073	4,764
Ant.....	23	11.20	23	12.15	23	20.50	23	23.59	Belgian.	Cy. Int. Com. & Arm't.	400.5	52.1	29.0	Coopilla, Chile.	Moers.	Nitrate of soda.	8,100	6,017	4,792
Cubore ¹⁸	23	17.15	23	17.58	24	13.25	24	13.25	American.	Calmar S. S. Corp.	456.6	57.2	28.4	Portland, Oreg.	Philadelphia, Pa.	Lumber.	8,305	.....	.....
Eldena.....	24	00.30	24	6.58	24	13.05	24	13.05	American.	Tampa Inter-ocean Co.	409.6	54.2	28.0	Kobe, Japan.	New York, N. Y.	General.	8,465	.....	.....
Taranaki.....	24	2.45	24	12.43	24	19.20	24	19.20	British.	Shaw, Savill & Albion.	483.0	64.2	25.0	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	9,012	11,706	8,320
Lochkarine ¹⁸	24	14.15	24	15.14	25	11.40	25	15.00	British.	Royal Mail S. S. Co.	485.4	62.3	29.3	Vancouver, B. C.	Rotterdam, Holland.	General.	9,750	10,802	7,595
La Perla.....	24	15.45	25	6.28	25	13.05	26	11.25	American.	United Fruit Co.	409.7	54.1	22.1	San Francisco, Cal.	Cristobal, C. Z.	General.	979	4,033	2,261
Pacific Oak.....	25	1.15	25	7.05	25	14.10	25	14.10	American.	Dimon S. S. Corp.	424.8	55.2	24.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,848	6,087	4,974
Robin Hood.....	25	3.45	25	7.19	25	14.50	25	14.50	American.	Isthmian S. S. Lines	500.3	63.3	24.0	Auckland, N. Z.	Baltimore, Md.	Lumber, general.	7,014	7,473	5,533
Corinthie.....	25	9.50	25	10.51	25	18.30	26	09.05	British.	Shaw, Savill & Albion.	482.8	61.8	24.0	Guayaquil, Ecuador	London, England.	General, frozen.	3,700	12,821	9,507
Virgilio ¹⁸	25	10.20	25	10.51	25	17.30	27	11.15	Italian.	Nav. Gen. Italiana.	482.8	61.8	24.0	Venezuela.	Genoa, Italy.	General.	1,590	12,941	9,329
Cargo.....	25	13.45	25	14.35	25	22.10	26	13.05	German.	Hamburg-American Line	227.2	34.4	15.0	Philadelphia, Pa.	Cristobal, C. Z.	General.	755	1,572	1,011
Jefferson Myers.....	25	16.30	25	17.19	26	13.05	26	13.05	American.	States S. S. Co.	440.0	56.0	27.0	Portland, Oreg.	Philadelphia, Pa.	Lumber, general.	8,425	8,390	6,020
Chalere.....	26	2.00	26	6.05	26	16.00	26	16.00	American.	Ore S. S. Corp.	550.0	72.2	35.0	Cruz Grande, Chile	Baltimore, Md.	Iron ore.	21,000	14,538	4,480
Western Sun ¹⁸	26	4.15	26	6.37	26	17.00	26	17.00	British.	Sun Oil Co.	480.6	66.0	28.0	Los Angeles, Calif.	Marques Hook, Pa.	Gasoline.	12,826	9,607	6,551
Zealandie ¹⁸	25	23.00	26	7.26	26	18.05	26	18.00	British.	Shaw, Savill & Albion.	482.6	64.2	23.0	Wellington, N. Z.	London, England.	General.	4,504	11,819	8,367
San Silvestre ¹⁸	26	6.00	26	7.55	26	18.50	26	20.40	British.	Shell Oil Co.	420.5	54.6	20.2	Valparaiso, Chile.	Pto. Mexico, Mex.	Ballast.	6,588	.....	.....
S-11 ¹⁹	26	8.15	26	8.15	26	19.10	26	19.10	American.	U. S. Navy.	231.0	20.0	.....	Balboa, C. Z.	Cristobal, C. Z.	.....	.....	.....	.....
Lieut. Col. H. C. Schumm ²⁰	26	7.15	26	8.53	26	19.40	26	19.40	American.	U. S. Army.	480.6	56.1	29.0	Balboa, C. Z.	Cristobal, C. Z.	Towing barge.	13,567	9,620	6,476
Henry D.....	26	8.00	26	9.16	26	20.20	26	20.20	American.	Sun Oil Co.	445.1	61.6	26.0	Los Angeles, Calif.	Chester, Pa.	Gasoline.	5,500	5,367	2,900
D. Whiton.....	26	15.10	26	16.18	27	12.15	27	12.15	American.	Dutton Lumber Co.	356.0	51.9	26.0	Tacoma, Wash.	Providence, R. I.	Lumber.	8,044	8,567	6,020
California ¹⁸	26	3.00	27	6.48	27	14.00	27	14.00	American.	Amer-Hawaiian Line.	445.1	59.8	26.1	Seattle, Wash.	Boston, Mass.	General.	5,000	4,613	2,996
Pueblo ¹⁸	26	23.30	27	6.48	27	14.00	27	14.00	American.	J. Barry & Son.	340.0	49.0	25.0	Seattle, Calif.	Tiverton, R. I.	Gasoline.	8,425	6,802	4,754
Sage Brush.....	27	1.30	27	7.05	27	14.45	27	14.45	American.	Shepard S. S. Co.	409.8	54.2	25.2	Seattle, Wash.	Boston, Mass.	Lumber, general.	8,425	6,802	4,754
Somersby.....	27	8.45	27	9.19	27	18.55	27	18.55	British.	Empire Shipping Co.	421.2	54.3	26.0	Victoria, B. C.	United Kingdom.	Wheat.	8,423	6,352	4,620
Norfolk.....	27	10.10	27	11.11	27	16.37	27	21.15	British.	Federal Steam Nav. Co.	520.0	64.2	22.0	Bluff, N. Z.	Glasgow, Scotland.	Frozen, general.	4,769	12,953	9,265

¹⁸ Tanker.¹⁹ Motor ship.²⁰ Submarine.²¹ Tug.²² For orders.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	Port—
June 21	Santore	Ore S. S. Corp.	Norfolk, Va.	June 21	No. 300-N ²³	Pan American-Grace Airways	Pimental via wayports.
June 22	Stella Lykes	Lykes Brothers S. S. Co.	Lake Charles, La.	June 21	No. 608-M ²³	Pan American Airways	San Salvador and waypts.
June 22	Dora K. ²²	A. L. Surgeon	Santa Marta, Colombia.	June 21	No. 9670 ²³	Pan American Airways	San Salvador and waypts.
June 22	France	French Line	St. Nazaire and wayports.	June 21	Costarica	Royal Netherlands S. S. Co.	Amsterdam via waypts.
June 23	Pastores	United Fruit Co.	Santa Marta, Colombia.	June 21	Ancon	Panama R. R. S. S. Line	New York via Haiti.
June 23	No. 300-N ²³	Pan American-Grace Airways	Pimental via wayports.	June 23	Stella Lykes	Lykes Brothers S. S. Co.	Galveston and wayports.
June 23	Inapaquina ²⁴	A. Tagaropulos	Colon, Rep. of Panama.	June 23	C. C. Acme ²⁶	R. Foster	San Andres, Colombia.
June 23	Anachucuna ²⁴	United Fruit Co.	Colon, Rep. of Panama.	June 23	Santore	Ore S. S. Corp.	Daiquiri, Cuba
June 24	Metapan	United Fruit Co.	New Orleans via Kingston.	June 23	Inapaquina ²⁴	A. Tagaropulos	Colon, Rep. of Panama.
June 24	Swiftagle	Shell Eastern Petroleum Co.	Curacao, D. W. I.	June 24	Anachucuna ²⁴	A. Tagaropulos	Colon, Rep. of Panama.
June 24	No. 608-M ²³	Pan American Airways	Miami via wayports.	June 24	Pastores	United Fruit Co.	New York via Kingston.
June 25	No. 9688 ²³	Colombian S. S. Line	San Salvador via waypts.	June 24	No. 607-M ²³	Pan American Airways	Miami via wayports.
June 25	Tolosa	Colombian S. S. Line	New York via wayports.	June 24	No. 9664 ²³	Pan American Airways	San Salvador and waypts.
June 26	Cefalu	United Fruit Co.	New Orleans via Habana.	June 24	Flandre	French Line	Harve via wayports.
June 26	Nora B. ²⁵	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.	June 25	Metapan	Pan American-Grace Airways	Pimental via wayports.
June 26	H. Blackwood	P. W. Hamilton	Colon, Rep. of Panama.	June 25	Iriona	United Fruit Co.	Colombian ports.
June 27	Annetta I. ²⁴	United Fruit Co.	Port Limon, Costa Rica.	June 25	Swiftagle	Shell Eastern Petroleum Co.	Port Limon, Costa Rica.
June 27	Teutonia	Hamburg-American Line	Tampico, Mexico.	June 26	Nora B. ²⁵	H. Blackwood	Curacao, D. W. I.
June 27	No. 9670 ²³	Pan American Airways	San Salvador and waypts.	June 26	Baracoa	Colombian S. S. Line	Port Limon, Costa Rica.
June 27	No. 144-M ²³	Pan American-Grace Airways	Pimental via wayports.	June 26	Tolosa	United Fruit Co.	New York via wayports.
June 27	No. 608-M ²³	Pan American Airways	Miami via wayports.	June 27	Annetta I. ²⁴	P. W. Hamilton	Colon, Rep. of Panama.
June 27				June 27	Cefalu	Standard Fruit & S. S. Co.	New Orleans and waypts.
June 27				June 27	Iriona	United Fruit Co.	New Orleans and waypts.
²² Motor ship.				²⁵ Schooner.			
²³ Air mail carrier.				²⁶ Motor schooner.			
²⁴ Motor boat.				PORT OF BALBOA.			
June 23	Baden Baden ²⁷	H. J. Lau	Puntarenas, Costa Rica.	June 24	Baden Baden ²⁷	H. J. Lau	Puntarenas, Costa Rica.

* Other than ships passing through the Canal.

Exclusion of Members of Hindoo Race from Panama.

The Acting Chief Quarantine Officer has issued a circular to steamship agents and others concerned quoting for their information a decree issued by the Government of Panama under date of May 27, 1931, relating to the exclusion of members of the Hindoo race from the Republic of Panama.

Under agreement with the Republic of Panama, the authorities of the Panama Canal endeavor to enforce in the Canal Zone the exclusion of persons whose entry into Panama is forbidden by Panama. Accordingly, in harmony with the decree quoted below, the Canal authorities will not permit entry of Hindoos except under the conditions established by the decree. Transit passengers or members of crew of this race will be held aboard the vessel or detained at the Balboa quarantine station unless special permission has been granted for their temporary entry by the Government of Panama; passengers of this race destined for Panama will be held by the quarantine authorities unless or until their entry into Panama has been authorized.

The circular of the Acting Chief Quarantine Officer follows:

THE PANAMA CANAL, HEALTH DEPARTMENT,
BALBOA HEIGHTS, C. Z., June 22, 1931.

TO ALL STEAMSHIP AGENTS AND OTHERS CONCERNED:

The following translation of Decree No. 43 of the Panamanian Government relating to the exclusion of members of the Hindoo race, is transmitted for your information:

JOHN D. ODOM,
Acting Chief Quarantine Officer.

DECREE NUMBER 43 OF 1931 (of May 27th) explaining further Article 2 of Law 71 of 1930.

The First Designate, in charge of the National Executive Power in the performance of his legal duties,

WHEREAS: Article 2 of Law 71 of 1930 reads as follows: "The Executive Power is hereby authorized to restrict or forbid the immigration of elements or laborers engaged in certain trades which places the native laborers who live together with them, in a precarious economical situation;"

That from experience had and after investigations made by the Foreign Relations Office it has been fully established, that the Hindoos who arrive in the country become a source of destructive competition to native laborers, due to the class of work that they undertake and the money consideration under which they are contracted to come to the Isthmus;

That notwithstanding the fact that the immigration of elements of the said nationality has been restricted, because the said immigration was considered undesirable due to racial and economical reasons; however, there is in the country at present a large number of Hindoos, engaged in all kinds of trades;

That the large number of laborers who are domiciled in the country are just sufficient to attend to the needs of the Hindoo commercial establishments that are operated in the cities of Panama and Colon, under which guarantee the immigration to the country of the largest portion of such elements has been permitted; and

That it is the duty of the Executive Power, by making use of the legal authority quoted in the initial paragraph above, to take all necessary steps by which to favor native laborers, particularly in these days of general crisis.

DECREES:

ARTICLE ONE.—The immigration into the country of elements of the Hindoo race is prohibited effective this date, with the exception of those who after submitting satisfactory proofs to the Office of the Secretary of Foreign Relations are coming with enough capital to establish themselves here.

Be it communicated and published.

Given at Panama, on the twenty-seventh day of the month of May, 1931.

(Sgd.) R. J. ALFARO.

The Secretary of Foreign Relations,
(Sgd.) J. J. VALLARINO.

"Iroquois" Makes Fast Run from New York.

The coastwise passenger steamer *Iroquois* of the Clyde-Mallory Line, arrived at Cristobal at 6 o'clock on the morning of June 22, 1931, en route to Los Angeles. She made transit of the Canal and cleared from Balboa the same day for the west-coast port. The voyage from New York to Cristobal was made in the fast time of 4 days and 14 hours, the vessel having left New York at 4 p. m., Wednesday, June 17. The *Iroquois*, which was built in 1927 to participate in the traffic between New York and Miami, has been recently chartered to the Los Angeles Steamship Company to replace the *Harvard* which grounded off San Francisco some time ago.

The *Iroquois* is 394 feet long, 62 feet beam, and of 6,210 gross tons. No passengers were carried on the voyage from New York to Los Angeles. It was expected that the ship would reach Los Angeles at 6 a. m., June 29, 7 days after arrival at Cristobal and 11 days 14 hours from New York.

Revision of Room Rates at Hotel Tivoli.

Effective June 1, 1931, room tariff at the Hotel Tivoli, Ancon, was revised. Formerly all rates in the off-season, May to November, were lower than those charged during the tourist season, December to April. According to the new tariff, rates for the higher grade rooms will be uniform during the entire year. The rate on rooms without bath has been considerably reduced. There have also been reductions in the rates for all grades of rooms when occupied by two persons.

The new daily rates now in effect for parlor and bedroom with bath, are \$12 single, \$16 double. For Grade A room with bath, \$6 single, \$8 double. For Grade 1 room with bath, \$5 single, \$7 double, during the tourist season, December to April, inclusive, and \$4 single, \$6 double, at other times. For Grade 2 room without bath, \$3 single, \$4.50 double, during tourist season, and \$2.50 single, \$4 double, at other times.

Directory of The Panama Canal.**Executive Department.**

Headquarters, Balboa Heights.

COL. HARRY BURGESS, U. S. A., Governor.

L. A. Poltrino, Secretary.

C. A. McILVAINE, Executive Secretary.

JNO. H. SMITH, Chief Clerk, Executive Office.

GUY JOHANNES, Chief, Police and Fire Division.

C. H. CALHOUN, Chief, Division of Civil Affairs.

BEN M. WILLIAMS, Superintendent, Division of Schools.

E. F. ATTAWAY, General Secretary, Bureau of Clubs and Playgrounds.

J. J. MCGUIGAN, District Attorney, Ancon.

N. A. BECKER, Land Agent and Assistant Counsel, Ancon.

Department of Operation and Maintenance.

(Under immediate direction of the Governor as head of the department.)

Headquarters, Balboa Heights.

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J. G. CLAYBOURN, Superintendent, Dredging Division.

LEONARD FOOTE, Assistant Superintendent, Dredging Division, Paraiso.

E. S. RANDOLPH, Designing Engineer, Madden Dam.

- MAJ. J. C. MEHAFFEY, U. S. A., Assistant Engineer of Maintenance.
 A. C. GARLINGTON, Electrical Engineer, Electrical Division.
 W. R. HOLLOWAY, Superintendent, Pacific Locks, Pedro Miguel.
 E. D. STILLWELL, Superintendent, Gatun Locks, Gatun.
 J. J. WALSH, Supervisor, Gatun Dam, Gatun.
 L. W. LEWIS, Office Engineer.
 R. Z. KIRKPATRICK, Chief of Surveys, Section of Surveys.
 G. W. GREEN, Municipal Engineer, Division of Municipal Engineering.
 CAPT. WILLIAM ANCRUM, U. S. N., Marine Superintendent, Marine Division.
 COMMANDER WM. R. SMITH, JR., U. S. N., Captain of the Port, Cristobal.
 COMMANDER GUY C. BARNES, U. S. N., Captain of the Port, Balboa.
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 J. H. K. HUMPHREY, Assistant Chief Quartermaster.
 SAMUEL GRIER, General Foreman, Transportation Division.
 J. E. HIGGINS, Director, Canal Zone Experiment Gardens, Balboa Heights.
 B. C. POOLE, District Quartermaster, Ancon-Balboa, Balboa Heights.
 J. M. KING, District Quartermaster, Cristobal-Gatun, Cristobal.
 C. PETERS, District Quartermaster, Pedro Miguel.
 WM. T. McCORMACK, Manager, Hotel Tivoli.
 JAS. E. LEWIS, Manager, Hotel Washington.
 A. W. GOULET, General Manager, Commissary Division, Mt. Hope. (P. R. R.)
 J. B. FIELDS, Constructing Quartermaster.
 E. H. PARMELEE, General Storekeeper, Balboa.
 A. P. E. DOYLE, Printer, The Panama Canal Press, Mount Hope.

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Headquarters, Balboa Heights.

- ELWYN GREENE, Auditor, The Panama Canal.
 WILSON H. KROMER, Assistant Auditor on the Isthmus.
 ROBERT W. GLAW, Paymaster.
 ALFRED H. MOHR, Collector.
 CARL F. CHASE, Chief Accountant.
 SAMUEL BARDELSON, Chief Examiner.
 H. H. HUDSON, Claim Officer.
 M. L. DUFF, Railroad Accountant.

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Headquarters, Balboa Heights.

- COL. J. F. SILER, U. S. A., Chief Health Officer.
 DR. D. P. CURRY, Assistant Chief Health Officer.
 DR. M. F. HARALSON, U. S. P. H. S., Chief Quarantine Officer.
 COL. A. M. WHALEY, U. S. A., Superintendent, Gorgas Hospital, Ancon.
 MAJ. H. P. MAKEL, U. S. A., Superintendent, Colon Hospital, Cristobal.
 MAJ. S. L. CHAPPELL, U. S. A., Superintendent, Corozal Hospital, Corozal.
 DR. J. L. BYRD, Health Officer of Panama City, Ancon.
 DR. D. G. SAMPSON, Health Officer of Cristobal-Colon, Cristobal.
 DR. C. A. HEARNE, Quarantine Officer, Cristobal.
 DR. J. D. ODOM, Quarantine Officer, Balboa.

Courts.

HON. JAMES J. LENIHAN, District Judge, Ancon.
 F. H. SHEIBLEY, Clerk of Court, Ancon.
 J. S. CAMPBELL, Deputy Clerk of Court, Cristobal.
 JOHN T. BARRETT, Canal Zone Marshal, Ancon.
 J. W. BLACKBURN, Magistrate, Balboa.
 P. E. MURRAY, Magistrate, Cristobal.

Wage and Complaints Boards.

Balboa Heights.

Wage Board:

MAJ. J. C. MEHAFFEY, representing The Panama Canal.
 H. A. McCONAUGHEY, representing employees.

Board on Complaints Concerning Working Conditions:

MAJ. J. C. MEHAFFEY, and Head of Department or Division interested, representing The Panama Canal.
 H. A. McCONAUGHEY and CHAS. F. WAHL, representing employees.

The Panama Canal in the United States.

Headquarters, Munitions Building, 19th and "B" Streets, NW., Washington, D. C.

A. L. FLINT, General Purchasing Officer and Chief of Office.
 E. E. WEISE, Assistant to the Chief of Office.
 E. D. ANDERSON, Chief Clerk, Purchasing Department.
 H. A. A. SMITH, Assistant Auditor.
 W. J. SHERIDAN, Assistant Purchasing Agent, 24 State St., New York, N. Y.
 W. A. E. DOYING, Inspecting Engineer, Washington, D. C.

Panama Railroad Company.

Headquarters, Balboa Heights.

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 S. W. HEALD, Superintendent (acting as Assistant to President).
 LIEUT. COL. J. L. SCHLEY, U. S. A., Second Vice President.
 R. B. WALKER, General Manager.
 W. F. FOSTER, Superintendent and Master of Transportation.
 A. L. PRATHER, Superintendent, Coaling Plants, Cristobal.
 CHAS. W. LEE, Assistant to General Manager and Commercial Agent.
 E. MCTUCKER, Roadmaster.
 JOHN O. COLLINS, Counsel, Ancon.

Office in the United States, 24 State Street, New York City.

T. H. ROSSBOTTOM, Vice President.
 W. R. PFIZER, Assistant to Vice President and Secretary.
 V. M. NEWTON, Treasurer.
 G. L. SELKIRK, Auditor.
 W. K. B. POTTS, Superintending Engineer.
 RICHARD REID ROGERS, General Counsel.
 T. S. SPRAGUE, Freight Traffic Manager.
 A. M. GIBSON, Passenger Agent.
 F. H. BUSCHMANN, Claim Agent.
 E. HATTON, Pier Superintendent.
 W. J. SHERIDAN, Commissary Purchasing Agent.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Two Weeks Ending June 27, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Orinoco.....	Hamburg-American Line.....	June 14.....	June 14.....	84	349
Itauri.....	Hamburg-American Line.....	June 14.....	June 14.....	162	76½
Delftdijk.....	Holland-America Line.....	June 14.....	June 15.....	75	7
Peter Kerr.....	Quaker S. S. Line.....	June 14.....	June 15.....	2	(¹)
Costarica.....	Royal Netherlands S. S. Co.....	June 15.....	June 15.....	9	19
Guayaquil.....	Panama R. R. S. S. Line.....	June 15.....	June 15.....	2	80
C. C. Acme.....	R. C. Foster.....	June 15.....	June 15.....	9	(¹)
Duchess D'Aosta.....	Navigazione Libera-Triestina.....	June 15.....	June 15.....	(¹)	220
Erfurt.....	North German Lloyd.....	June 15.....	June 16.....		

¹ No cargo discharged.

² No cargo laded.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Elisa.....	Grace Line.....	June 15.....	June 16.....	161	165
Nosa King.....	N. O. & S. A. S. S. Co.....	June 15.....	June 16.....	183	90
Los Angeles.....	Hamburg-American Line.....	June 16.....	June 16.....	93	104
Canadian Conqueror.....	Canadian National Steamships.....	June 16.....	June 16.....	120	(²)
West Nilus.....	McCormick S. S. Co.....	June 16.....	June 17.....	10	117
Zacapa.....	United Fruit Co.....	June 16.....	June 17.....	59	712
Davision.....	Leyland S. S. Line.....	June 16.....	June 17.....	397	(²)
Magallanes.....	Spanish S. S. Line.....	June 16.....	June 20.....	193	215½
Anachucuna.....	A. Tagaropulos.....	June 16.....	June 17.....	51	(²)
Tela.....	United Fruit Co.....	June 17.....	June 18.....	1,433	154
Pastores.....	United Fruit Co.....	June 17.....	June 18.....	516	385
Ancon.....	Panama R. R. S. S. Line.....	June 17.....	June 17.....	2,260	.....
President Madison.....	Dollar Line.....	June 18.....	June 18.....	70	(²)
Nosa Chief.....	N. O. & S. A. S. S. Co.....	June 18.....	June 18.....	232	32
Cali.....	Roland Line.....	June 18.....	June 18.....	826	.....
Patricia.....	Hamburg-American Line.....	June 18.....	June 19.....	48	447
Caldas.....	National Navigation Co.....	June 18.....	June 18.....	.....	125
Lagarto.....	Pacific Steam Navigation Co.....	June 18.....	June 18.....	19	24
Amerika.....	Danish-East Asiatic Line.....	June 18.....	June 18.....	2	(²)
Timavo.....	Navigazione Libera-Triestina.....	June 18.....	June 19.....	(¹)	153
Ferdeford.....	Canadian Transport Co.....	June 18.....	June 19.....	240	(²)
Cauca.....	National Navigation Co.....	June 18.....	June 18.....	174	.....
Calamares.....	United Fruit Co.....	June 19.....	June 19.....	238	119
Pearl Marie.....	R. Feuillebois.....	June 19.....	June 19.....	(¹)	23
Tsuyama Maru.....	Nippon Yusen Kaisha.....	June 19.....	June 19.....	98	(²)
Sanyo Maru.....	Osaka Shosen Kaisha.....	June 19.....	June 19.....	207	(²)
Acajutla.....	Pacific Steam Navigation Co.....	June 19.....	June 19.....	965	.....
Costarica.....	Royal Netherlands S. S. Co.....	June 19.....	June 19.....	7	.....
Canden.....	United Fruit Co.....	June 19.....	June 19.....	4,799	.....
Santa Rita.....	Grace Line.....	June 19.....	June 20.....	187	235
Atlantida.....	Standard Fruit & S. S. Co.....	June 19.....	June 20.....	322	178
Colombia.....	Panama Mail S. S. Co.....	June 20.....	June 20.....	188	.....
Buenaventura.....	Panama R. R. S. S. Line.....	June 20.....	June 20.....	228	(²)
Ooslar.....	North German Lloyd.....	June 20.....	June 20.....	49	447
Laurits Swenson.....	Fred Olsen & Co.....	June 20.....	June 20.....	(²)	452
Durazzo.....	Hamburg-American Line.....	June 20.....	June 20.....	.....	301
Tela.....	United Fruit Co.....	June 20.....	June 20.....	71	252
Alabama.....	French Line.....	June 20.....	June 20.....	100	.....
Ancon.....	Panama R. R. S. S. Line.....	.....	June 21.....	.....	947
Costarica.....	Royal Netherlands S. S. Co.....	.....	June 21.....	.....	723
Colombia.....	Panama Mail S. S. Co.....	.....	June 21.....	.....	553
Alabama.....	French Line.....	.....	June 21.....	.....	22
Designer.....	T. & J. Harrison.....	June 21.....	June 22.....	333	(²)
Gregalia.....	Donaldson Brothers.....	June 22.....	June 22.....	(¹)	109
Santa Maria.....	Grace Line.....	June 22.....	June 22.....	137	252
Stella Lykes.....	Lyles Brothers.....	June 22.....	June 23.....	631	14
Orduna.....	Pacific Steam Navigation Co.....	June 22.....	June 23.....	26	(²)
San Lucas.....	Pacific-Atlantic S. S. Co.....	June 22.....	June 23.....	38	(²)
George Washington.....	Fred Olsen & Co.....	June 22.....	June 23.....	427	(²)
Flandre.....	French Line.....	June 22.....	June 24.....	25	664
Jason.....	Royal Netherlands S. S. Co.....	June 22.....	June 22.....	30	54
Baarn.....	Royal Netherlands S. S. Co.....	June 22.....	June 22.....	93	74
Tai Yin.....	Barber S. S. Line.....	June 23.....	June 23.....	285	56
Vancouver.....	Hamburg-American Line.....	June 23.....	June 23.....	2	104
Venezuela.....	Panama Mail S. S. Co.....	June 23.....	June 24.....	942	9
Pastores.....	United Fruit Co.....	June 23.....	June 24.....	94	640
Iriona.....	United Fruit Co.....	June 24.....	June 25.....	993	14
Metapan.....	United Fruit Co.....	June 24.....	June 25.....	701	373
Swift eagle.....	Mallory S. S. Line.....	June 24.....	June 25.....	11,780	(²)
Emil Kirdorf.....	Hamburg-American Line.....	June 25.....	June 25.....	27	130
Loehkatrine.....	Royal Mail Steam Packet Co.....	June 25.....	June 25.....	(¹)	43
Baraoa.....	Colombian S. S. Line.....	June 25.....	June 26.....	290	432
Gen. M. H. Sherman.....	Arrow S. S. Line.....	June 25.....	June 26.....	281	(²)
La Perla.....	United Fruit Co.....	June 25.....	June 26.....	1,107	(²)
Santa Clara.....	Grace Line.....	June 25.....	June 26.....	287	434
Tacoma.....	Hamburg-American Line.....	June 25.....	June 26.....	189	241
Virgilio.....	Italian S. S. Line.....	June 25.....	June 27.....	15	14
Cerigo.....	Hamburg-American Line.....	June 25.....	June 25.....	755	.....
Nora B.....	H. Blackwood.....	June 26.....	June 26.....	(¹)	3
Tolosa.....	United Fruit Co.....	June 26.....	June 26.....	265	45
Orazio.....	Italian S. S. Line.....	June 26.....	June 26.....	215	.....
Cefalu.....	Standard Fruit & S. S. Co.....	June 26.....	June 27.....	222	181
Losada.....	Pacific Steam Navigation Co.....	June 26.....	June 27.....	1	64
Cali.....	Roland Line.....	June 26.....	June 27.....	.....	243
Acajutla.....	Pacific Steam Navigation Co.....	June 27.....	June 27.....	.....	876
Teutonia.....	Hamburg-American Line.....	June 27.....	June 27.....	14	.....
Canada.....	Johnson S. S. Line.....	June 27.....	June 27.....	99	(²)
Iriona.....	United Fruit Co.....	June 27.....	June 27.....	11	343
Cauca.....	National Navigation Co.....	June 27.....	June 27.....	360

* No cargo discharged.

* No cargo laded.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical
information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., July 8, 1931.

No. 49.

Traffic by Nationality for June, 1931.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1931, classified according to nationality of vessels by direction of transit, and the combined traffic in both directions, together with the corresponding totals for June, 1930 and 1929:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	1	4,030	3,214	5,045	3,140	\$2,901.60	.....
British.....	50	269,750	191,190	322,728	194,426	220,298.95	104,066
Chilean.....	3	4,828	3,497	8,032	4,220	4,371.25	1,111
Colombian.....	4	570	550	880	550	668.90	475
Danish.....	6	35,175	25,090	42,597	26,493	27,552.79	7,804
Danzig.....	1	8,224	7,068	12,175	6,974	5,921.28	.....
Dutch.....	5	25,916	16,163	27,883	16,251	19,648.18	6,527
French.....	3	16,049	10,233	18,120	10,285	12,791.25	6,050
German.....	14	58,219	40,141	67,407	40,186	50,176.25	21,398
Italian.....	3	21,498	14,229	26,639	16,230	17,786.25	3,178
Japanese.....	9	50,050	41,697	61,663	39,642	49,887.12	35,999
Norwegian.....	10	50,398	32,371	54,527	32,654	38,886.30	37,858
Panamanian.....	1	22	24	45	29	26.40	46
Swedish.....	5	25,419	17,084	47,013	20,734	18,417.74	7,406
United States.....	93	511,177	384,200	624,197	383,861	447,278.32	249,860
Yugoslav.....	2	9,948	7,158	11,748	7,122	7,162.56	.....
Total, June, 1931.....	210	1,091,273	793,824	1,330,699	802,890	923,775.14	472,778
Total, June, 1930.....	259	1,291,603	980,994	1,633,780	992,514	1,099,764.87	699,652
Total, June, 1929.....	272	1,287,393	977,989	1,604,457	981,033	1,117,940.01	899,386

PACIFIC TO ATLANTIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	2	8,757	7,305	11,494	7,815	\$9,131.25	15,276
British.....	52	279,843	209,041	343,818	210,008	258,607.31	349,408
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,171
Colombian.....	5	630	599	977	599	718.10	958
Danish.....	6	29,647	21,571	30,037	18,618	26,963.75	43,431
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,799
Dutch.....	4	15,902	10,273	17,194	10,447	12,843.75	22,780
French.....	4	20,382	13,848	24,518	14,248	17,310.00	27,066
German.....	14	57,130	38,381	64,011	38,689	47,253.90	69,124
Italian.....	2	15,135	9,577	19,267	11,470	11,971.25	9,601
Japanese.....	4	23,409	19,078	29,800	18,774	23,847.50	26,636
Norwegian.....	10	51,945	34,513	57,791	31,762	43,147.50	79,371
Panamanian.....	1	22	24	45	29	30.00	40
Swedish.....	3	15,017	9,930	25,949	12,370	12,412.50	35,375
United States.....	81	436,525	336,542	550,292	337,434	420,224.25	537,167
Total, June, 1931.....	190	967,273	721,223	1,194,678	726,193	897,633.59	1,286,198
Total, June, 1930.....	219	1,066,634	803,976	1,337,332	812,704	1,001,229.66	1,447,529
Total, June, 1929.....	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616

COMBINED TRAFFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	3	12,787	10,519	16,539	10,955	\$12,032.85	15,276
British.....	102	549,593	400,141	666,546	404,434	478,906.29	453,469
Chilean.....	4	9,533	6,963	15,342	8,196	8,703.75	2,282
Colombian.....	9	1,200	1,149	1,857	1,149	1,387.00	1,433
Danish.....	12	64,822	46,661	72,634	45,111	54,516.54	54,235
Danzig.....	2	16,448	14,136	24,350	13,948	14,756.28	15,799
Dutch.....	9	41,818	26,443	45,077	26,698	32,491.93	29,307
French.....	7	36,431	24,081	42,638	24,533	30,101.25	33,116
German.....	28	115,349	78,522	131,418	78,855	97,435.15	90,522
Italian.....	5	36,633	23,806	45,906	27,700	29,757.50	12,779
Japanese.....	13	73,459	60,775	91,463	58,416	73,734.62	62,635
Norwegian.....	20	102,343	66,889	112,318	67,416	82,033.80	117,229
Panamanian.....	2	44	48	90	58	56.40	86
Norwegian.....	8	40,436	27,014	72,962	33,104	30,830.24	42,781
United States.....	174	947,702	720,742	1,174,489	721,298	867,502.57	828,027
Yugoslav.....	2	9,948	7,158	11,748	7,122	7,162.56	.....
Total, June, 1931.....	400	2,058,546	1,515,047	2,525,377	1,528,993	1,821,408.73	1,758,976
Total, June, 1930.....	478	2,358,237	1,784,970	2,971,112	1,805,218	2,100,994.53	2,147,181
Total, June, 1929.....	503	2,352,431	1,787,779	2,946,181	1,797,003	2,127,805.97	2,424,002

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Week Ending June 27, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
St. Mihiel.....	U. S. Government.....	June 19.....	June 23.....	489	118
Colombia.....	Panama Mail S. S. Co.....	June 21.....	June 22.....	27	.....
Santa Maria.....	Grace Line.....	June 22.....	June 22.....	9	.....
Venezuela.....	Panama Mail S. S. Co.....	June 22.....	June 23.....	109	1
Tai Yin.....	Barber S. S. Line.....	June 22.....	June 23.....	374	.....
Baarn.....	Royal Netherlands S. S. Co.....	June 22.....	June 23.....	100	.....
Baden Baden.....	H. J. Lau.....	June 23.....	June 24.....	24	.....
George Washington.....	Fred Olsen & Co.....	June 23.....	June 24.....	1,503	1
La Perla.....	United Fruit Co.....	June 24.....	June 25.....	374	23

Tanker Traffic Through the Panama Canal in June, 1931.

During the month of June, 1931, 49 tank ships transited the Canal with an aggregate net tonnage, Panama Canal measurement, of 282,563, on which tolls of \$250,826.69 were paid. Cargo amounted to 277,228 tons, comprised of 270,528 tons of mineral oils and 6,700 tons of coconut oil.

In point of net tonnage, tanker traffic decreased 35.3 per cent in comparison with the tanker traffic for the corresponding month a year ago, while cargo tonnage decreased 39.9 per cent.

Tank ships comprised 12.3 per cent of the total commercial transits through the Canal during the month; made up 13.7 per cent of the total Panama Canal net tonnage; were source of 13.8 per cent of the tolls collected; and carried 15.8 per cent of the total cargo through the Canal. These are the lowest proportions for tanker traffic for any month since the beginning of large shipments from the California field in 1922.

The number, aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the month of June, 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the two preceding months and for June, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
British.....	3	18,796	\$13,533.12	.....
Danzig.....	1	8,224	5,921.28	.....
Norwegian.....	1	4,317	3,108.24	.....
United States.....	18	105,977	77,404.68	8,457
Total, June, 1931.....	23	137,314	99,967.32	8,457
Total, May, 1931.....	31	168,495	125,916.68	13,740
Totals, April, 1931.....	31	178,523	131,825.47	16,767
Total, June, 1930.....	65	345,896	256,991.09	27,972
<i>Pacific to Atlantic.</i>				
British.....	7	34,611	35,926.87	60,339
Danzig.....	1	8,224	8,835.00	15,799
Norwegian.....	2	12,506	13,095.00	23,253
United States.....	16	89,908	93,002.50	* 169,380
Total, June, 1931.....	26	145,249	150,859.37	268,771
Total, May, 1931.....	30	174,281	177,326.75	316,294
Total, April, 1931.....	38	225,203	231,846.94	403,030
Total, June, 1930.....	44	245,517	251,649.15	432,961

* Includes 6,700 tons coconut oil.

The following tabulation shows the tanker traffic through the Canal during June, 1931, classified according to trade routes:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>Atlantic to Pacific.</i>				
United States intercoastal.....	17	97,358	\$71,199.00	8,457
United States to South America.....	1	4,326	3,114.72	.....
Canada to South America.....	2	14,470	10,418.40	.....
Europe to United States.....	2	12,936	9,313.92	.....
Europe to South America.....	1	8,224	5,921.28	.....
<i>Pacific to Atlantic.</i>				
United States intercoastal.....	15	86,192	89,123.75	162,680
United States to West Indies.....	1	6,839	7,008.75	12,491
United States to Europe.....	3	14,386	14,902.50	24,987
South America to United States.....	1	4,326	4,633.75	7,957
South America to Canada.....	2	13,964	15,613.75	32,173
South America to Central America.....	1	4,546	3,273.12	.....
South America to Europe.....	2	11,550	12,425.00	21,783
Philippine Islands to United States.....	1	3,716	3,878.75	* 6,700

* Coconut oil.

Of the tanker traffic passing through the Canal in June, 1931, the following is a summary of the vessels giving Los Angeles as their port of origin or destination, together with the totals for the the two preceding months and for June, 1930:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
<i>To Los Angeles.</i>				
June, 1931.....	19	110,294	\$80,512.92	8,457
May, 1931.....	22	116,497	85,220.49	3,748
April, 1931.....	24	134,042	96,510.24	.....
June, 1930.....	56	300,724	219,484.66	9,782
<i>From Los Angeles.</i>				
June, 1931.....	17	98,042	101,297.50	183,831
May, 1931.....	20	115,283	116,952.50	212,030
April, 1931.....	26	147,531	152,761.60	266,202
June, 1930.....	33	189,882	191,944.40	330,780

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 4, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Nationality.	Line (Charterer or operator.)	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	
Orazio ²	26	8 05	28	6 00	28	13 05	28	14 20	Italian	482.8	61.0	23.5	Genoa, Italy.	Valparaiso, Chile.	General.	1,005.12	9,977
Illinois ¹	27	20 45	28	6 20	28	13 23	28	14 52	American	416.8	56.1	19.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	6,945	5,011
Challenger ²	27	23 35	28	7 10	28	13 40	28	15 40	American	441.0	56.0	21.0	Baltimore, Md.	Vancouver, B. C.	Steel, general.	3,689	7,780
Japanese	28	1 20	28	8 25	28	13 00	28	16 00	British	410.0	60.0	19.6	New York, N. Y.	Manila, P. I.	General.	3,043	9,240
San Bernardino	28	12 00	28	14 30	28	21 25	28	22 42	American	410.5	54.2	17.8	Philadelphia, Pa.	Seattle, Wash.	General.	2,413	6,755
Crode Jefe ¹	28	18 05	29	6 03	29	13 30	29	15 40	Venezuelan	325.0	55.0	10.8	Mannagua, Venezuela	Batavia, C. Z.	Ballast.	10,405	7,401
Trojanstar	28	23 05	29	6 15	29	14 16	29	15 40	British	473.0	62.0	23.0	N. Shields, England	Vancouver, B. C.	Ballast.	5,689	4,630
Boliver	29	1 00	29	7 10	29	14 29	29	15 40	Belgian	400.0	52.0	22.0	Antwerp, Belgium	Vancouver, B. C.	Ballast.	15,560	4,490
Amerikaland ²	29	12 10	29	12 25	29	18 30	29	20 00	Swedish	561.0	72.0	22.3	Baltimore, Md.	Cruz Grande, Chile	Ballast.	1,638	6,585
Wido.	29	19 20	29	13 20	29	20 11	29	21 30	German	333.0	54.0	17.3	Hamburg, Germany	Valparaiso, Chile	General.	290	4,631
Cambrai ⁴	29	2 05	29	14 33	29	20 48	30	12 55	American	436.0	58.0	23.0	Brooklyn, N. Y.	San Francisco, Cal.	General.	1,643	8,878
Nebraska	29	17 40	30	6 00	30	14 30	30	15 30	British	460.0	62.0	20.0	London, England	Vancouver, B. C.	General.	3,909	9,407
Kwato Maru	29	21 25	30	6 45	30	14 22	30	16 30	Japanese	460.0	62.0	22.6	Philadelphia, Pa.	Shanghai, China.	General.	2,585	7,107
Daylight ²	30	2 09	30	8 35	30	16 24	30	17 30	American	481.0	66.0	22.6	New York, N. Y.	Los Angeles, Calif.	Ballast.	2,585	7,107
Pennsylvania	30	11 15	30	11 20	30	17 43	30	20 18	American	407.7	63.7	20.0	Boston, Mass.	Seattle, Wash.	General.	2,394	5,008
Huguenot ¹	30	13 00	30	13 10	30	20 45	30	21 43	American	454.0	66.2	20.1	Baltimore, Md.	Los Angeles, Calif.	Ballast.	2,200	9,576
Silverleaf	30	16 50	30	17 05	1	11 37	1	12 30	British	436.0	62.0	17.0	New York, N. Y.	Singapore, St. Sect.	General.	2,115	5,871
Canadian	30	22 20	1	6 15	1	13 25	1	14 30	British	413.0	52.0	17.0	Montreal, Canada	Vancouver, B. C.	General.	6,664	6,583
Spinor.	1	9 50	1	10 00	1	16 51	1	18 15	Japanese	407.3	50.10	25.6	New York, N. Y.	Yokohama, Japan	Cotton, general.	2,809	8,400
Hague Maru	1	8 15	1	11 25	1	18 25	1	19 43	Norwegian	368.5	53.7	13.4	Philadelphia, Pa.	Arica, Chile	General.	3,000	8,699
Tercero ²	1	8 20	1	12 10	1	19 05	1	20 29	American	445.0	58.5	18.7	Philadelphia, Pa.	Portland, Oreg.	General.	3,805	6,869
San Julian	1	00 20	1	12 10	1	19 05	1	20 29	American	445.0	58.5	18.7	Philadelphia, Pa.	Portland, Oreg.	General.	1,842	10,332
Hornee Luck-	1	9 35	1	12 55	1	20 00	1	21 24	American	445.0	58.0	19.8	Boston, Mass.	Seattle, Wash.	General.	9,742	6,373
embach.	1	12 15	1	13 25	1	20 54	1	22 00	British	403.0	52.0	15.6	Norfolk, Va.	Toconilla, Chile	Ballast.	6,925	4,952
Marbana.	30	18 00	1	14 30	1	21 51	1	22 50	Norwegian	398.0	54.7	19.5	Rosario, Argentine.	Vancouver, B. C.	General, bananas	9,741	8,286
Villager ²	30	18 05	1	14 30	1	21 51	1	22 50	Norwegian	398.0	54.7	19.5	Rosario, Argentine.	Vancouver, B. C.	General.	7,149	4,927
Oregon ²	1	13 15	2	5 55	2	13 05	2	14 00	French	468.0	61.3	18.7	Dunkirk, France.	Vancouver, B. C.	Coal, general.	116	6,838
Tidewater	1	21 50	2	6 05	2	13 33	2	15 55	American	481.0	66.0	21.0	New York, N. Y.	Los Angeles, Calif.	Ballast.	3,795	5,684
Associated ²	2	6 30	2	7 05	2	14 00	2	15 05	American	417.0	56.0	19.0	New York, N. Y.	Los Angeles, Calif.	General.	2,167	7,209
New Jersey ¹	2	00 50	2	9 25	2	16 16	2	17 30	British	460.0	60.0	26.6	Antwerp, Belgium	Seattle, Wash.	Crescote.	7,149	4,927
Adellen ²	2	00 50	2	9 25	2	16 16	2	17 30	British	460.0	60.0	26.6	Antwerp, Belgium	Seattle, Wash.	Crescote.	116	6,838
Scottish	2	4 00	2	13 05	2	21 09	2	22 30	British	426.0	56.0	19.2	Androssan, England	Los Angeles, Calif.	Ballast.	3,795	5,684
Borderer ²	19	11 35	2	14 14	2	21 09	2	22 30	American	395.0	54.0	14.6	Cartagena, Col.	Gatun, C. Z.	Ballast.	2,167	7,209
Asheville ²	1	20 15	2	16 35	3	9 36	3	10 40	Norwegian	225.0	41.0		Rotterdam, Holland	Vancouver, B. C.	Bananas.	116	6,838
Tanager ²	1	20 15	2	16 35	3	9 36	3	10 40	Norwegian	225.0	41.0		Rotterdam, Holland	Vancouver, B. C.	Bananas.	3,795	5,684
Willfaro.	2	16 45	2	16 55	3	11 25	3	12 40	American	386.0	52.0	18.0	Baltimore, Md.	Tacoma, Wash.	General.	2,167	7,209
New Orleans ²	2	23 25	3	6 10	3	13 27	3	17 09	American	395.5	55.0	21.4	New York, N. Y.	Melbourne, Auslia	General.	2,167	7,209

¹ Gunboat.² Transport.³ Balboa for dry-docking.⁴ Motor ship.⁵ Tanker.

President	3	5	20	3	3	14	21	3	22	00	American	Dollar Line	516.5	72.0	25.5	New York, N. Y.	Manila, P. I.	1,810.15, 299.10, 566
Madison	3	4	45	3	3	15	16	4	14	American	Panama-Pacific Line	574.4	80.3	26.9	New York, N. Y.	San Francisco, Cal.	2,509.24, 590.17, 565	
Carolina	3	3	05	3	3	15	28	3	16	30	British	Amers-Pacific Line	479.0	62.3	28.0	New York, N. Y.	Brisbane, Australia	8,258.9, 458.6, 867
Point Palmas	3	10	35	3	3	17	40	3	18	40	American	Swayne & Hoyt	386.0	52.0	21.8	Houston, Texas	Seattle, Wash.	5,059.5, 708.4, 138
Pacific	3	11	05	3	3	17	59	3	23	58	British	Furness, Withy & Co.	420.0	58.0	17.0	Manchester, Eng.	Vancouver, B. C.	633.7, 892.5, 858
Shipper	3	5	30	3	3	19	02	3	19	55	Chilean	Cia. Sud. Amer. de Vap.	422.8	56.2	24.2	New York, N. Y.	Valparaiso, Chile	1,109.7, 764.4, 705
Aonesga	3	21	25	4	4	6	10	4	13	34	British	Shaw, Savill & Albion	427.0	63.0	26.8	London, England	N. Plymouth, N. Z.	5,200.11, 216.7, 884
Matakana	25	22	10	4	9	00	4	16	30	German	Hamburg-American Line	277.2	34.4	13.0	Cristobal, C. Z.	Guayaquil, Ecuador	223.1, 572.1, 011	
Cerigo	3	18	20	4	9	27	4	15	50	American	Grace Line	360.2	52.0	22.0	New York, N. Y.	Valparaiso, Chile	1,097.5, 957.4, 325	
Santa Elisa	4	11	25	4	9	27	4	17	52	4	American	Amer-Hawaiian Line	405.0	54.0	18.0	Boston, Mass.	Portland, Ore.	2,137.0, 760.4, 450
Columbian	4	13	15	4	20	19	5	1	30	American	Isthmian S. S. Lines	309.0	48.0	20.0	Mobile, Ala.	San Francisco, Cal.	4,345.3, 393.3, 119	
Fairfield	4	13	15	4	20	19	5	1	30	American	Amers-Hawaiian Line	523.0	64.0	22.8	Genoa, Italy	Vancouver, B. C.	633.13, 787.9, 856	
California	4	8	00	4	13	40	4	22	16	Italian	Nuv. Libera Trieste	409.0	54.0	22.0	Baltimore, Md.	Seattle, Wash.	4,000.6, 531.4, 795	
Losmar	4	15	20	4	22	35	4	23	56	American	Calmar Line	409.0	54.0	22.0	Baltimore, Md.	Seattle, Wash.	4,000.6, 531.4, 795	

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Texas	27	15	05	28	6	21	28	13	30	28	13	30	American	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	New York, N. Y.	8,451.6, 782.4, 830
Tidewater	27	19	10	28	6	54	28	13	30	28	13	30	American	Tidewater Oil Co.	480.6	66.0	28.2	Los Angeles, Calif.	New York, N. Y.	13,971.9, 742.6, 373
President	28	4	52	28	7	15	28	13	30	28	13	30	American	Dollar Line	517.0	72.2	29.0	Manila, P. I.	New York, N. Y.	7,119.15, 234.10, 511
S-10	28	13	35	28	14	15	28	13	30	28	13	30	American	U. S. Navy	231.0	20.0		Bahia, C. Z.	Cristobal, C. Z.	7,156.6, 108.4, 358
Nordard	28	13	35	28	14	15	28	13	30	28	13	30	Norwegian	Fern Line	377.6	54.0	25.0	Iloilo, P. I.	N. Atl. Pts., U. S.	2,674.6, 255.5, 016
Santa Inez	28	13	50	28	6	11	29	12	55	29	10	05	American	Grace Line	370.0	53.2	19.0	Valparaiso, Chile	New York, N. Y.	7,119.15, 234.10, 511
Charles R.	28	22	30	29	7	08	29	15	20	29	15	20	American	Munson, McCork'K Line	401.4	53.2	26.0	Seattle, Wash.	Baltimore, Md.	7,765.7, 082.5, 167
Iowan	29	10	15	29	10	46	29	17	25	29	20	25	American	Amer-Hawaiian Line	407.7	53.7	25.0	Portland, Ore.	Boston, Mass.	5,304.7, 079.5, 028
Montrolite	29	10	15	29	11	16	29	19	05	29	19	05	British	Imperial Oil Co., Ltd.	510.9	68.2	30.0	Cabo Blanco, Peru	Montreal, Canada	15,673.11, 555.6, 753
Sjornborg	29	14	30	29	15	14	29	22	10	29	22	10	Danish	Can. Amer. Ship. Co.	380.0	53.9	26.0	Vancouver, B. C.	London, England	7,293.6, 219.4, 691
Virginia	29	11	30	29	6	15	30	13	50	30	14	25	American	Panama-Pacific Line	586.4	80.3	31.0	San Francisco, Cal.	New York, N. Y.	6,691.25, 254.18, 170
Odenwald	29	18	35	30	7	30	30	15	05	30	19	20	German	Hamburg-Amercan Line	399.5	54.3	26.0	Valparaiso, Chile	Hamburg, Germany	8,169.6, 808.4, 979
Livingston Roc	30	9	00	30	9	39	30	17	15	30	17	15	American	Shell Oil Co.	462.4	60.2	28.0	Los Angeles, Calif.	New York, N. Y.	10,585.8, 849.1, 665
Susan V.	30	9	45	30	10	30	30	17	45	30	17	45	American	Luckenbach Line	484.3	57.7	25.0	Portland, Ore.	Boston, Mass.	7,210.7, 947.5, 688
Luckenbach	30	11	45	30	13	30	30	21	20	30	21	20	American	The Texas Co.	509.7	70.3	31.0	Los Angeles, Calif.	New York, N. Y.	16,855.12, 514.8, 427
Australia	30	12	45	30	13	36	30	20	50	30	22	50	Danish	East Asiatic Co.	470.3	63.7	31.0	Vancouver, B. C.	Newcastle, England	12,700.11, 157.8, 336
Canadian	30	15	45	30	16	46	30	14	05	1	19	25	British	Can. Nat. Steamships	400.3	52.4	23.0	Vancouver, B. C.	Montreal, Canada	6,206.5, 858.4, 108
Plantor	30	20	10	30	16	46	30	14	05	1	19	25	British	U. S. Army	448.0	58.0	26.0	San Francisco, Cal.	Brooklyn, N. Y.	151.1, 151.1, 151.1
Someone	30	20	10	30	16	46	30	14	05	1	19	25	American	British Oil Shipping Co	410.0	53.5	25.0	Los Angeles, Calif.	War. Dept. gen.	7,786.6, 010.4, 094
Oliphant	30	18	50	30	17	10	30	16	25	1	17	23	British	Pacific Steam Nav. Co.	215.0	33.5	13.4	Champerio, Guat.	Cristobal, C. Z.	271.1, 270.7, 735
Salvador	30	18	50	30	17	10	30	16	25	1	17	23	British	Furness, Withy & Co.	450.4	60.8	28.0	Vancouver, B. C.	London, England	9,132.10, 086.7, 226
Pacific Grove	30	18	50	30	17	10	30	16	25	1	17	23	British	H. B. Mailton	385.0	51.0	25.0	Bahia, C. Z.	Ballast	3.1, 3.1, 3.1
Junior E.	30	17	30	30	18	03	29	11	35	2	13	15	American	Kokusan Kisen Kaisha	561.1	72.2	35.0	Iloilo, P. I.	Galun, C. Z.	7,206.5, 928.4, 381
Ohio Maru	30	17	30	30	18	03	29	11	35	2	13	15	Japanese	Ore S. S. Corp.	561.1	72.2	35.0	Cruz Grande, Chile	New York, N. Y.	22,146.45, 424.4, 421
Svealand	30	17	30	30	18	03	29	11	35	2	13	15	Swedish	Ishamian S. S. Lines	395.5	55.0	27.0	Vancouver, B. C.	Avonmouth, Eng.	7,824.7, 321.5, 237
Chickasaw	30	17	30	30	18	03	29	11	35	2	13	15	Swedish	Donaldson Brothers	415.5	54.2	27.0	Vancouver, B. C.	Glasgow, Scotland	6,430.6, 809.4, 842
City	30	17	30	30	18	03	29	11	35	2	13	15	Swedish	Calmar S. S. Corp.	410.0	54.2	25.4	Seattle, Wash.	Baltimore, Md.	7,746.6, 604.4, 055
Gracia	1	23	10	2	6	57	2	14	15	2	14	15	British	Calmar S. S. Corp.	410.0	54.2	25.4	Seattle, Wash.	Baltimore, Md.	7,746.6, 604.4, 055
Flomar	2	2	38	2	7	24	2	15	15	2	15	15	American	Calmar S. S. Corp.	410.0	54.2	25.4	Seattle, Wash.	Baltimore, Md.	7,746.6, 604.4, 055

* Gasoline and kerosene.

* Launched.

* Submarine.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	Gross.	Net.
Eleanor Christenson.	2	5.55	2	8.11	2	16.25	2	16.25	American.	Arrow Line.	410.5	54.3	25.0	Portland, Ore.	Baltimore, Md.	Lumber.	6,931	6,572	4,788
Chattanooga City.	2	8.30	2	9.28	2	17.50	3	1.15	American.	Isthmian S. S. Lines.	424.2	56.2	26.2	Shanghai, China.	Baltimore, Md.	Sugar, general.	7,666	7,611	5,450
Barat.	2	13.30	2	13.55	2	20.45	3	13.20	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	13.5	Buenaventura, Col.	Cristobal, C. Z.	Coffee, general.	742	1,182	742
Scottish Heather.	1	22.56	3	6.21	3	16.00	3	16.00	British.	Anglo-Saxon Pet. Co.	442.0	57.0	27.0	Los Angeles, Calif.	Lands End, Eng.	Gasoline.	8,215	7,570	4,892
Winnipeg.	2	22.47	3	6.38	3	14.55	4	00.55	French.	French Line.	495.0	58.3	27.0	Vancouver, B. C.	La Havre, France.	General.	6,590	10,619	7,592
Seattle.	3	2.00	3	7.16	3	15.40	4	00.30	German.	Hamburg-American Line.	461.5	61.1	26.0	Vancouver, B. C.	Hamburg, Germany.	General.	6,796	9,267	6,834
Nebraska.	3	2.30	3	8.20	3	16.30	3	16.30	American.	Amer.-Hawaiian Line.	471.1	60.0	25.0	Seattle, Wash.	Boston, Mass.	General.	7,383	9,082	6,638
Orlando Maru.	2	23.43	3	8.53	3	17.00	3	17.00	Japanese.	Tatsumi S. S. Co.	400.0	54.5	26.0	Manila, P. I.	Atl. coast, U. S. A.	Sugar.	7,300		
Steel Age.	3	7.00	3	9.12	3	18.10	3	20.10	American.	Norton, Lilly & Co.	395.5	55.0	27.0	Port Allen, T. H.	New York, N. Y.	Sugar.	8,750	7,330	5,245
Manizales.	3	9.15	3	10.05	3	18.16			German.	Roland Line.	216.5	32.9	14.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	587	1,132	741
New York.	3	11.40	3	12.28	3	20.00			American.	The Texas Co.	416.8	56.1	27.0	Los Angeles, Calif.	Providence, R. I.	Gasoline.	8,478	6,775	4,841
City of San Francisco.	3	14.30	4	6.18	4	12.50	5	16.55	American.	Panama Mail S. S. Co.	296.1	45.9	16.0	San Francisco, Cal.	Puerto Colombia.	General.	563	3,848	2,606
Spencer Kellogg.	3	21.10	4	6.49	4	14.05	4	14.05	American.	N. Y. & Phila. S. S. Co.	391.8	51.3	24.0	Manila, P. I.	New York, N. Y.	Coconut oil.	6,785	5,601	3,902
Canadian.	3	21.50	4	7.25	4	15.20	4	20.50	British.	Can. Nat. Steamships.	400.0	52.4	17.0	Brisbane, Australia	Montreal, Canada.	General.	2,535	5,914	4,195
Commander.	2	22.10	4	7.26	4	16.50			Colombian.	National Navigation Co.	116.0	21.1	8.0	Buenaventura, Col.	Cristobal, C. Z.	General.	216	211	124
Caldas.	4	12.25	4	13.03	4	19.55	4	22.50	Norwegian.	Interocean S. S. Corp.	415.0	54.9	26.0	Vancouver, B. C.	Rotterdam, Holland	Lumber, general.	7,068	6,853	5,246
Brimanger.	4	13.10	4	13.53	4	21.15	4	21.15	Danish.	East Asiatic Co.	425.2	55.3	30.0	Vancouver, B. C.	Copenhagen, Den.	Lumber, general.	10,255	7,396	5,588
Asia.	4	14.50	4	15.38	4	22.30	4	22.30	Colombian.	United Fruit Co.	107.4	22.9	11.4	Buenaventura, Col.	Cristobal, C. Z.	Coffee.	277	262	161

10 Motor ship.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

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PORT OF CRISTOBAL.—Continued.

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	Date.	Vessel.	Line.
June 30.....	Inapaquina ¹⁴	A. Tagaropulos	June 29.....	Viking ¹⁴	George F. Baker, jr.
July 1.....	Cristobal	Panama R. R. S. S. Line	June 30.....	Inapaquina ¹⁴	A. Tagaropulos
July 1.....	Sixola	United Fruit Co.	June 30.....	Simon Bolivar	Royal Netherlands S. S. Co.
July 1.....	Tela	United Fruit Co.	July 1.....	No. 9670 ¹⁵	Pan American Airways
July 1.....	No. 945-M ¹⁵	Pan American-Grace Airways	July 1.....	Metapan	Pan American Airways
July 1.....	Galicia	Hamburg-American Line	July 1.....	Tela	United Fruit Co.
July 1.....	No. 9664 ¹⁵	Pan American Airways	July 2.....	Sixola	United Fruit Co.
July 1.....	No. 667-M ¹⁵	Pan American Airways	July 2.....	Galicia	Hamburg-American Line
July 2.....	Simon Bolivar	Royal Netherlands S. S. Co.	July 2.....	No. 144-M ¹⁵	Pan American-Grace Airways
July 2.....	Carmelita ¹⁶	Standard Fruit & S. S. Co.	July 2.....	Carmelita ¹⁶	Standard Fruit & S. S. Co.
July 3.....	Atlantida	United Fruit Co.	July 3.....	Ariguaní	Elders & Fyfes Line
July 3.....	Ulua	United Fruit Co.	July 3.....	Ulua	United Fruit Co.
July 3.....	Ariguaní	Elders & Fyfes Line	July 3.....	Atlantida	Standard Fruit & S. S. Co.
July 4.....	Bogota	Colombian S. S. Line	July 4.....	Bogota	Colombian S. S. Line
July 4.....	Tela	United Fruit Co.	July 4.....	Tela	United Fruit Co.
July 4.....	C. D. Mallory & Co.	Pan American-Grace Airways	July 4.....	Simon Bolivar	Royal Netherlands S. S. Co.
July 4.....	No. 144-M ¹⁵	Pan American Airways	July 4.....	Annetta I. ¹⁴	P. W. Hamilton
July 4.....	No. 698-M ¹⁵	P. W. Hamilton	July 4.....		
July 4.....	Annetta I. ¹⁴				

¹⁴ Motor boat. ¹⁵ Air mail carrier. ¹⁶ Motor schooner.

PORT OF BALBOA.

Date.	Vessel.	Line.	Date.	Vessel.	Line.
July 2.....	San Jose	United Fruit Co.	July 3.....	San Jose	United Fruit Co.
July 3.....	Real ¹⁷	Hans Elliott	July 3.....	Real ¹⁷	Hans Elliott
July 3.....	A. B. Obarrio ¹⁷	A. Valdez	July 3.....	A. B. Obarrio ¹⁷	A. Valdez
July 3.....	Des Hermanos ¹⁷	Hans Elliott	July 3.....	Des Hermanos ¹⁷	Hans Elliott
July 3.....	Nueva Panama ¹⁸		July 4.....	Nueva Panama ¹⁸	

* Other than ships passing through the Canal.

¹⁷ Motor schooner. ¹⁸ Motor ship.San Francisco, Calif.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.
Panama Bay, R. P.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 4, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Orazio	Italian S. S. Line		June 28.		41
Teutonia	Hamburg-American Line		June 28.		439
President Pierce	Dollar Line	June 28.	June 28.	452	1
Creole Jefe	Creole Petroleum Co.	June 28.	June 29.	2,820	(²)
Wido	North German Lloyd	June 28.	June 29.	172	11
Santa Inez	Grace Line	June 29.	June 29.	164	112
Simon Bolivar	Royal Netherlands S. S. Co.	June 29.	June 30.	57	¹ / ₄
Kwanto Mam	Osaka Shosen Kaisha	June 29.	June 30.	(¹)	1
Nebraska	Royal Mail Steam Packet Co.	June 29.	June 30.	276	21
Odenwald	Hamburg-American Line	June 30.	June 30.	94	(²)
Metapan	United Fruit Co.	June 30.	July 1.	37	226
Villanger	Westfal, Larsen & Co.	June 30.	July 1.	(¹)	85
Cristobal	Panama R. R. S. S. Line	July 1.		2,563	
San Julian	States S. S. Line	July 1.	July 1.	112	22
Salvador	Pacific Steam Navigation Co.	July 1.		271	
Oregon	French Line	July 1.	July 2.	242	129
Tela	United Fruit Co.	July 1.	July 2.	1,048	94
Galicia	Hamburg-American Line	July 1.	July 2.	24	72
Taranger	Westfal, Larsen & Co.	July 1.	July 2.	(¹)	116
Sixaola	United Fruit Co.	July 1.	July 2.	395	391
Simon Bolivar	Royal Netherlands S. S. Co.	July 2.	July 4.	3 ¹ / ₂	570
Baralt	Royal Netherlands S. S. Co.	July 2.		738	
Ulna	United Fruit Co.	July 3.	July 3.	213	32
Winnipeg	French Line	July 3.	July 3.	139	128
Manizales	North German Lloyd	July 3.		587	
Seattle	Hamburg-American Line	July 3.	July 3.	31	183
Santa Elisa	Grace Line	July 3.	July 4.	133	108
Bogota	Colombian S. S. Line	July 3.	July 4.	68	299
Atlantida	Standard Fruit and S. S. Co.	July 3.	July 4.	178	11
Cerigo	Hamburg-American Line		July 4.		223
Ecuador	Panama Mail S. S. Co.	July 4.		304	
Swiftscout	C. D. Mallory & Co.	July 4.		11,725	
City of San Francisco	Panama Mail S. S. Co.	July 4.		658	
Abraham Lincoln	Fred Olsen & Co.	July 4.		328	
Margaret Johnson	Johnson S. S. Line	July 4.		129	
Tela	United Fruit Co.	July 4.	July 4.	9 ¹ / ₂	208
California	Navigazione Libera-Triestina	July 4.	July 4.	84	(²)
Caldas	National Navigation Co.	July 4.		216	
Cauca	National Navigation Co.	July 4.		305	
Reina del Pacifico	Pacific Steam Navigation Co.	July 4.		175	
Canadian Commander	Canadian National Steamships	July 4.	July 4.	107	(²)

* No cargo discharged.

* No cargo laded.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices, including the 25 per cent surcharge, to individuals and companies, effective July 7, 1931.

Commodities.	Unit.	Price.
Brass, bar, average	Lb.	\$0.24
Brass, sheet, average	Lb.	.24
Bronze, Tobin, average	Lb.	.24
Gasoline, motor grade	Gal.	.105
Metal, yellow	Lb.	.23
Oakum, Navy, spun	Lb.	.16
Oakum, Navy, unspun	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder	Gal.	.28
Oil, burning, Colza	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250	Gal.	.39
Oil, kerosene, in drums	Gal.	.07
Oil, marine engine	Gal.	.49
Paint, lead, white, dry	Lb.	.14
Paint, lead, white, in oil	Lb.	.11
Paint, zinc oxide, dry	Lb.	.10
Paint, zinc oxide, in oil	Lb.	.11
Grease, gear, chain and wire rope, lubricating	Lb.	.05
Grease, yellow, cup, No. 3	Lb.	.08
Grease, yellow, cup, No. 5	Lb.	.09
Soda, ash	Lb.	.03
Waste, cotton, colored	Lb.	.13
Waste, cotton, white	Lb.	.15

THE PANAMA CANAL RECORD

OFFICIAL PUBLICATION OF THE PANAMA CANAL.

PUBLISHED WEEKLY.

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The Panama Canal, Washington, D. C.

Entered as second-class matter February 6, 1918, at the Post Office

at Cristobal, C. Z., under the Act of March 3, 1879.

Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., July 15, 1931.

No. 50.

Cargo Through the Canal During June, 1931.

On pages 704 and 705 of this issue will be found tables showing the origin and destination of cargo passing through the Canal in June, 1931. This cargo, segregated according to direction as compared with June, 1930, and the differences, are shown in the following tabulation:

	June, 1930.	June, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Atlantic to Pacific	699,652	472,778	—226,874
Pacific to Atlantic	1,447,529	1,286,198	—161,331
Total	2,147,181	1,758,976	—388,205

It will be noted from the above that the Atlantic to Pacific tonnage decreased 226,874 tons (32.4 per cent) in comparison with June, 1930, and that from the Pacific to the Atlantic decreased 161,331 tons (11.2 per cent), making a total decrease of cargo tonnage in both directions of 388,205 tons (18.1 per cent). The heavy decrease in the movement from the Atlantic to the Pacific (as has been true for several months), has been caused by a curtailment in the shipment of almost all commodities normally routed in this direction. In the movement from the Pacific to the Atlantic several important gains were made last month—mostly in food products—but the increases were all absorbed by heavy decreases in the shipments of mineral oils and ores. The total cargo tonnage passing through the Canal during the past month was the lowest since February, 1923, when 1,563,278 tons were carried through.

ATLANTIC TO PACIFIC CARGO MOVEMENT.

Origin.—Seventy (70) per cent of the cargo tonnage from the Atlantic to the Pacific originated on the eastern and Gulf seaboard of the United States and 20.6 per cent in Europe, these two areas contributing over 90 per cent of the total cargo moving in this direction in June, 1931. In comparison with June, 1930, tonnage from the United States declined 126,539 tons (27.7 per cent), while that from Europe decreased 79,431 tons (44.9 per cent). The percentage of the total originating in the United States was higher in the past month than in June, 1930, while the proportion of the total coming from Europe was lower.

Destination.—Forty-seven and eight-tenths (47.8) per cent of the Pacific-bound cargo was destined to the United States; 21.5 per cent to Asia; 9.4 per cent to South America; and 7.9 per cent to Australasia. Tonnage to all these areas decreased in comparison with June, 1930, as follows: To the United States, 79,278 tons (26.0 per cent); to Asia, 26,647 tons (20.8 per cent); to South America, 55,799 tons (55.7 per cent); and to Australasia, 62,855 tons (62.8 per cent). The proportion of the total cargo destined to the United States and Asia showed increases over June, 1930, while the proportionate amounts destined to South America and Australasia decreased in comparison with the corresponding month last year.

PACIFIC TO ATLANTIC CARGO MOVEMENT.

Origin.—Of the cargo moving in this direction, 46.5 per cent came from the United States; 21.0 per cent from South America; 19.7 per cent from Canada; 7.6 per cent from Asia; and 4.7 per cent from Australasia. Cargo from Canada showed a proportionate as well as an actual increase in tonnage in comparison with June, 1930, as did that originating in Asia. The actual increase in tonnage from Canada amounted to 76,000 tons (42.8 per cent), and that from Asia, 30,568 tons (45.1 per cent). Cargo tonnage from the other before-mentioned regions decreased in relation to the total cargo as well as in actual tonnage in comparison with June, 1930. The decreases were as follows: From the United States, 156,543 tons (20.7 per cent); from South America, 76,163 tons (22.0 per cent); and from Australasia, 19,386 tons (24.5 per cent). Larger wheat shipments from Canada contributed to the increased tonnage from that area, while from Asia the rice and soya bean shipments were higher.

Reduced mineral oil shipments was the principal cause of the decreased tonnage from the west coast of the United States, while from South America the curtailed ore tonnage contributed largely to the shrinkage of cargo tonnage from that area.

Destination.—Segregated according to destination, 51.0 per cent of the total cargo moving from the Pacific to the Atlantic went to the United States, and 41.6 per cent to Europe, these two areas absorbing 92.6 per cent of the cargo tonnage moving in this direction. Tonnage to the United States decreased 226,700 tons (25.7 per cent), while that to Europe increased 85,977 tons (19.2 per cent). In their relations to the total cargo, tonnage to the United States was considerably lower in June, 1931, than in June, 1930, while that to Europe was considerably higher in June, 1931. Smaller mineral oil and ore shipments contributed largely to the decline in the former instance, while larger wheat shipments was the leading cause of the increased tonnage to Europe.

PRINCIPAL COMMODITIES, ATLANTIC TO PACIFIC.

From the cargo declarations submitted it was possible to classify approximately 90 per cent of the total cargo in transit through the Canal from the Atlantic to the Pacific during the month of June, 1931. The remaining 10 per cent consisted, for the most part, of manufactured goods in small lots reported as "General cargo."

Pacific-bound commodities which aggregated more than 10,000 tons for June, 1930, or June, 1931, are listed in the following tabulation:

Commodity.	June, 1930.	June, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Automobiles.....	12,533	6,715	-5,818
Cement.....	24,487	15,247	-9,240
Coal and coke.....	23,892	7,218	-16,674
Cotton.....	8,885	14,250	+5,365
Manufactured goods:			
Iron and steel.....	146,205	93,410	-52,795
Machinery.....	13,807	7,293	-6,514
Railroad material.....	15,016	5,583	-9,433
Tinplate.....	28,599	25,155	-3,444
Miscellaneous.....	21,874	25,913	+4,044
Metal, scrap.....	12,841	758	-12,083
Oils, mineral.....	57,313	32,254	-25,064
Paper.....	16,525	16,225	-300
Phosphates.....	35,866	22,631	-13,235
Sugar.....	15,728	11,389	-4,339
Sulphur.....	18,053	17,778	-280
Tobacco.....	7,490	16,858	+9,368

The above 16 commodity groups for June, 1931, comprise 67.4 per cent of the total cargo moving from the Atlantic to the Pacific. Three of the items—cotton, miscellaneous manufactured goods, and tobacco, showed increases, while the others registered losses.

PRINCIPAL COMMODITIES, PACIFIC TO ATLANTIC.

From the cargo declarations submitted it was possible to classify approximately 99 per cent of the cargo moving from the Pacific to the Atlantic during June, 1931. Commodities which aggregated more than 10,000 tons either during the past month or the corresponding month in 1930, are listed below:

Commodity.	June, 1930.	June, 1931.	Difference.
	<i>Long tons.</i>	<i>Long tons.</i>	<i>Long tons.</i>
Barley.....	21,742	17,921	-3,821
Beans.....	5,951	21,565	+15,614
Canned goods (fish, fruit, vegetables, etc.).....	33,328	56,939	+23,611
Coffee.....	12,166	12,691	+525
Cold storage (food products).....	20,697	34,852	+14,155
Fruit, dried.....	12,783	15,708	+2,925
Fruit, fresh.....	10,217	19,863	+9,646
Lumber.....	250,235	220,287	-29,948
Metals, various.....	50,993	39,653	-11,340
Nitrates.....	44,847	47,591	+2,744
Oats.....	1,664	19,603	+17,939
Oils, mineral.....	425,710	263,093	-162,617
Ores (principally iron).....	208,440	78,573	-129,867
Rice.....	1,390	12,293	+10,903
Sugar.....	77,752	76,784	-968
Wheat.....	114,888	195,947	+81,059
Wool.....	13,708	20,004	+6,296

* Does not include fresh fruit.

The above 17 commodity groups for June, 1931, comprise 89.7 per cent of the cargo moving from the Pacific to the Atlantic. Eleven of the items show increases, and 6 decreases. The more important increases were in food products. Heavy decreases were registered in the shipments of mineral oils and ores.

(Continued on next page.)

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Balboa, C. Z., for Two Weeks Ending July 11, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				<i>Tons.</i>	<i>Tons.</i>
Santa Clara.....	Grace Line.....	June 26.....	June 26.....	203	.....
President Adams.....	Dollar Line.....	June 26.....	June 26.....	.....	1
Acajutla.....	Pacific Steam Navigation Co.....	June 27.....	June 27.....	.....	3
Santa Inez.....	Grace Line.....	June 28.....	June 29.....	1	.....
Cambrai.....	U. S. Government.....	June 28.....	June 30.....	17	6
Somme.....	U. S. Government.....	June 30.....	July 1.....	167	39
San Jose.....	United Fruit Co.....	July 2.....	July 2.....	280	51
President Madison.....	Dollar Line.....	July 3.....	July 3.....	24	.....
California.....	Panama Pacific Line.....	July 3.....	July 3.....	.....	167
City of San Francisco.....	Panama Mail S. S. Co.....	July 3.....	July 4.....	133	.....
Santa Elisa.....	Grace Line.....	July 4.....	July 4.....	76	.....
Nora.....	Union Oil Co.....	July 4.....	July 5.....	5,473	.....
Abraham Lincoln.....	Fred Olsen & Co.....	July 5.....	July 6.....	1,452	2
American Star.....	Nelson Line.....	July 6.....	July 7.....	227	.....
Ecuador.....	Panama Mail S. S. Co.....	July 6.....	July 6.....	33	2
Santa Barbara.....	Grace Line.....	July 6.....	July 6.....	9	2
Guatemala.....	Panama Mail S. S. Co.....	July 6.....	July 7.....	130	24
Solna.....	Anglo-Saxon Petroleum Co.....	July 7.....	July 8.....	7,290	.....
Trocas.....	Shell Oil Co.....	July 7.....	July 9.....	8,937	.....
Saramacca.....	United Fruit Co.....	July 9.....	July 9.....	231	.....
Santa Maria.....	Grace Line.....	July 10.....	July 10.....	132	5
City of Elwood.....	Roosevelt S. S. Co.....	July 11.....	July 12.....	528	.....
Rakuyo Maru.....	Nippon Yusen Kaisha.....	July 11.....	July 12.....	104	.....

Origin and Destination of Cargo Passing Through the Panama Canal from the Atlantic to the Pacific, June, 1931.—Continued from page 703.

(Figures represent tons of 2,240 pounds.)

From—	NORTH AMERICA.					SOUTH AMERICA.					AUSTRALASIA.				ASIA.				Grand total.	Per cent of total cargo.			
	West coast of United States.	West coast of Canada.	West coast of Central America.	Balboa, C. Z. ²	Hawaiian Islands.	Total, North America.	Chile.	Colombia.	Ecuador.	Peru.	West coast of South America. ¹	Total, South America. ²	Australia.	New Zealand.	Australasia. ¹	Total, Australasia.	Philippine Islands.	China.			Japan.	Far East. ¹	Total, Asia.
NORTH AMERICA:																							
UNITED STATES—																							
North Atlantic ports	138,756	660,127			134,19,009	159,829	4,519	749	962,1,630		7,860,5,614		650		6,264	9,046,22,493	21,013	9,192	61,744,235,697	49.9			
South Atlantic ports	4,786					4,786									366	172	336	22	224	34,680,89,470	1.2		
Gulf ports	40,500	7,178			675	48,353	1,225	37	227	151	12	1,652,1,100	3,685		4,785	1,190	8,491	24,999			18.9		
Total, United States	184,042	7,838,1,270			134,19,684	212,968	5,744	786,1,189	1,781	12	9,512,7,080	4,335			11,415	10,408,31,320	46,034	9,416	97,178,331,073	70.0			
East coast of Canada	4,765	5,310				10,075									4,201					14,276	3.0		
Cristobal, C. Z. ²	1,255	24,565				4,844		899,1,197	860	438	182	3,576	1,979	2,222					8,420	1.8			
West Indies	130,11,664			108		11,902	42			4		46								11,948	2.6		
Total, North America	190,192,24,836	4,835		242,19,684	239,789	6,685,1,983	2,049	2,223	194,13,134	9,059	6,557				15,616	10,408,31,320	46,034	9,416	97,178,365,717	77.4			
EUROPE:																							
British Isles	3,413	5,103				8,516	7,924	124	754	2,085		10,887			18,853					38,256	8.1		
Belgium	9,403	1,800		53		11,256	2,659	72	152	912	58	3,853								15,109	3.2		
France	1,294	32	9			1,335	1,211		263		1,474				2,762	2,762				5,571	1.2		
Germany	8,062	442		4		8,508	2,584	37	538	1,003	1,804	5,966								14,474	3.1		
Holland	2,259	245				2,504	741	43	116	558	1,458									3,962	0.8		
Italy	400	300	405		200	1,305	83			3	635	721								2,026	0.4		
Norway and Sweden	5,566	163	2,239	1,438		9,406	2,449	1,300		200		3,949								13,355	2.8		
Spain and Portugal	364		8			372	115			38		153								525	0.1		
Europe ¹	133	200,1,178				1,511	65				2,580	2,645								4,156	0.9		
Total, Europe	30,894	8,285,3,839	1,495	200	44,713,17,831	5,076,5,062	5,077	31,106			18,853	2,762	21,615							97,434	20.6		
East coast of South America	4,840	75	14			4,929		115			115								4,583	9,627	2.0		
Grand total	225,926,33,196	8,688,1,737	19,884,289,431	24,516,3,674	3,609,7,285	5,271,44,355	9,059	25,410	2,762	37,231	10,408,31,320	50,617	9,416	101,761	472,778	100.0							
Per cent of total cargo:																							
June, 1931	47.8	7.0	1.8	0.4	4.2	61.2	5.2	0.8	0.8	1.5	1.1	9.4	1.9		5.4	0.6	7.9			10.7	2.0	21.5	100.0
June, 1930	43.5	5.2	1.1	0.4	2.8	53.0	7.9	0.3	1.0	1.4	3.7	14.3	2.6		9.9	1.8	14.3			10.0	3.2	18.4	100.0
June, 1929	40.7	3.0	2.1	1.4	1.8	49.0	9.0	0.6	0.6	1.4	6.4	18.0	5.5		8.3	1.2	15.0			8.9	2.7	18.0	100.0

² General cargo not routed so as to allow segregation between definite ports.² Includes both local and transit cargo.

Origin and Destination of Cargo Passing Through the Panama Canal from the Pacific to the Atlantic, June, 1931.

(Figures represent tons of 2,240 pounds.)

From—	North America.										Europe.										Grand total.	Per cent of total cargo.																																																																	
	UNITED STATES.					East coast of Cen- tral America.					West Indies.					Total, North America.							British Isles.					Belgium.					Denmark.					France.					Germany.					Holland.					Italy.					Norway and Sweden.					Spain and Portugal.					Europe. [†]					Total, Europe.					East coast of South America.					Egypt.				
	North Atlan- tic ports.	South Atlan- tic ports.	Gulf ports.	Total, United States.	East coast of Canada.	East coast of Cen- tral America.	Cristobal, C. Z.*	West Indies.	Total, North America.	British Isles.	Belgium.	Denmark.	France.	Germany.	Holland.	Italy.	Norway and Sweden.	Spain and Portugal.	Europe. [†]	Total, Europe.			East coast of South America.	Egypt.																																																															
NORTH AMERICA:																																																																																							
West coast United States.	437,700	3,351	19,987	461,038	3,086	3,048	18,594	483,766	55,493	2,030	159	5,125	15,776	5,096	819	4,156			20,977	109,631	5,180	598,577																																																																	
West coast of Canada.	11,486			11,486					96,307	6,483	624	25,581	3,949	6,832	3,767				82,992	226,385	1,617	253,521																																																																	
W. coast Central America	28			28					3,342	557	73	204	300						1,134			4,476																																																																	
Balboa, C. Z.									40																																																																														
Hawaiian Islands.	838			838					838	203				5					261			1,089																																																																	
Total, North America	450,052	3,351	19,987	473,390	3,086	6,481	19,197	513,505	152,500	8,586	783	30,910	20,030	11,778	4,586	4,209			103,969	337,411	6,797	857,713																																																																	
SOUTH AMERICA:																																																																																							
Chile.	78,069	8,000	3,104	89,173					17,283	7,615	100	1,545	7,812	1,383	1,188	2,711			35,670	75,307	18	165,194																																																																	
Colombia.	2,579			2,579					6,373	4	41	6,072	50	156	426				110			6,483																																																																	
Ecuador.	9,549			9,549					11,383										29	6,778		18,161																																																																	
Peru.	5,044			5,044					37,363	22,445	416	757	9	2,664	8,080	34	7,352		124	42,481		79,814																																																																	
West coast South America [†]	8			8					13	432									210	642		655																																																																	
Total, South America	95,249	8,000	3,158	106,407	32,173	5,580	841	145,001	40,164	8,072	857	7,626	10,636	10,219	1,648	10,063			36,033	125,318	18	270,337																																																																	
AUSTRALASIA:																																																																																							
Australia.	838			838	1,353				2,249													2,249																																																																	
New Zealand.	781			781	113				53,053											53,053		54,007																																																																	
Australasia [†]																				3,570		3,570																																																																	
Total, Australasia.	1,619			1,619	1,466	118			3,203	53,053				3,570						56,623		59,826																																																																	
ASIA:																																																																																							
Philippine Islands.	48,708			48,708					55,409													55,409																																																																	
China.	10,151	48		10,199					133	10,734				7,124						7,124		17,858																																																																	
Japan.	7,299			7,299					15	7,559												7,559																																																																	
Far East [†]	1,008			1,008					8,530	9,538										7,958		17,496																																																																	
Total, Asia.	67,166	48		67,194					8,678	83,240				7,124						15,082		98,322																																																																	
Grand total.	614,086	11,399	29,925	655,410	44,990	3,086	12,747	28,716	744,949	253,735	16,658	1,640	42,106	37,790	21,997	6,234	14,272		140,002	534,436	8,815	1,286,198																																																																	
Per cent of total cargo:																																																																																							
June, 1931.	47.7	1.0	2.3	51.0	3.5	0.2	1.0	2.2	57.9	19.8	1.3	0.1	3.3	2.9	1.7	0.5	1.1		10.9	41.6	0.5	100.0																																																																	
June, 1930.	56.7	1.4	2.9	61.0	3.4	0.1	1.2	2.0	67.7	15.9	0.9	0.1	1.0	2.6	1.8	1.1			7.5	30.9	0.3	100.0																																																																	
June, 1929.	58.9	1.3	3.5	63.7	3.5	0.1	0.9	2.4	70.6	16.1	1.3	0.1	1.7	2.1	0.8	0.1	0.9	0.5	4.8	28.4	1.0	100.0																																																																	

* General cargo not routed so as to allow segregation between definite ports. † Includes both local and transit cargo.

MOVEMENTS OF OCEAN VESSELS. Week ending at midnight, July 11, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.			
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Gross.	Net.	
Abraham Lincoln ²	4	15	35	5	6	15	6	17	20	Norwegian.	Fred Olsen Line.	435.0	56.0	19.11	Oslo, Norway.	Steel, general.	3,207	8,005	5,953	
Wichita ²	4	21	05	5	5	13	40	5	14	American.	Roosevelt S. S. Co., S. B.	395.0	55.0	24.0	New York, N. Y.	General, case oil.	5,194	7,209	5,172	
Reina del Pacifico ²	4	21	30	5	8	00	5	14	41	British.	Pacific Steam Nav. Co.	550.0	76.01	27.0	Liverpool, England	General.	2,609	13,871	13,099	
Sheaf Holme.	4	22	02	5	7	30	5	15	55	British.	Messrs. Wornus & Co.	406.0	54	05	Newcastle, Eng.	Coal.	7,200	6,692	5,094	
El Cervo ²	5	4	35	5	8	45	5	16	30	British.	Anglo-Ecuador. Oilfields.	407.0	52	02	Philadelphia, Pa.	Ballast.	6,046	4,326		
Toba Maru.	5	8	30	5	8	55	5	16	12	Japanese.	Nippon Yusen Kaisha.	445.0	58.0	23.0	Baltimore, Md.	Kobe, Japan.	5,684	8,058	5,743	
Mobile City.	5	11	15	5	11	20	5	18	10	American.	Island S. S. Lines.	411.0	55.0	21.0	Baltimore, Md.	Seattle, Wash.	4,577	7,330	5,241	
Barati.	2	20	55	5	13	20	5	22	15	Dutch.	Royal Neth. S. S. Co.	200.0	32.0	11.1	Cristobal, C. Z.	General, steel.	167	1,183	742	
Margaret.	4	22	55	5	13	30	5	20	27	Swedish.	Johnson Line.	407.0	54.0	18.03	Stockholm, Sweden	General.	2,025	7,048	5,837	
Solana ²	5	15	45	5	15	55	5	22	18	American.	Tidewater Oil Co.	419.0	56	05	New York, N. Y.	San Francisco, Cal.	⁽⁹⁾ 1,618	7,000	5,025	
Florida.	4	21	45	6	00	6	23	30	American.	Panama Mail S. S. Co.	380.0	48	07	New York, N. Y.	San Francisco, Cal.	General, coffee.	1,567	5,926	4,178	
Cauca ²	4	22	30	6	5	55	6	13	45	Colombian.	National Navigation Co.	107.0	23	07	Cristobal, C. Z.	Buenaventura, Col.	General.	57	262	161
Kuretake Maru	5	22	55	6	6	15	6	13	59	Japanese.	Interocean S. S. Corp.	404.0	53.0	19.0	Galveston, Tex.	Shanghai, China.	⁽⁷⁾ 2,776	5,665	4,167	
Buenos Aires Maru ²	6	1	05	6	7	25	6	14	49	Japanese.	Oaska Shosen Kaisha.	461.0	62.0	20.08	Buenos Aires, Arg.	Kobe, Japan.	General, cotton.	1,989	10,446	7,631
S-10 ²				6	7	25	6	15	15	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-11 ²				6	7	25	6	15	15	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-48 ²				6	7	25	6	15	32	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-15 ²				6	8	25	6	15	32	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-16 ²				6	8	25	6	15	37	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
S-17 ²				6	8	25	6	15	37	American.	U. S. Navy.	231.0	21.1		Cristobal, C. Z.	Balboa, C. Z.	Ballast.			
San Vicente.	5	23	55	6	10	05	6	18	00	American.	Quaker S. S. Line.	410.0	54	08	New York, N. Y.	Seattle, Wash.	General.	2,490	6,572	4,900
Indiana.	6	10	50	6	16	49	6	17	32	British.	Inter. Freightling Co.	402.0	52.0	14.05	Norfolk, Va.	Teopilla, Chile.	Ballast.	5,634	4,172	
Dorin ⁴	5	8	00	6	13	55	6	21	35	British.	J. T. Cruikshank	186.0	25.7	10.0	St. Pierre, N. F.	Shanghai, China.	Liquors.	600	431	299
Brielle.	6	00	55	6	13	55	6	22	35	Dutch.	Royal Neth. S. S. Co.	403.0	58.0	17.08	Hamburg, Germany	Corral, Chile.	General.	1,472	7,322	4,798
Elg ²	6	20	50	6	20	10	7	9	45	Norwegian.	Canadian Transp. Co.	370.0	51.0	18.07	Cornbrook, N. F.	Seattle, Wash.	Newsprint paper.	2,812	5,179	3,761
Rooster ⁵	6	13	50	7	6	00	7	14	15	American.	U. S. Navy.	380.0	64.0	26.05	Cristobal, C. Z.	Gatun Lake, C. Z.	General.	4,407	1,007	7,698
Donau.	6	1	55	7	5	55	7	14	15	German.	North German Lloyd.	521.0	64.0	24.0	Antwerp, Belgium	Vancouver, B. C.	General.	4,407	1,007	7,698
Nelson.	6	22	00	7	7	25	7	15	05	American.	Nelson Line.	380.0	53.0	17.06	New York, N. Y.	Seattle, Wash.	General.	2,715	5,667	4,133
Traveler.	7	00	30	7	8	30	7	15	55	Norwegian.	Fearnley & Eger	381.0	53	08	New Orleans, La.	Shanghai, China.	General.	1,733	6,291	4,630
Fernmoor ²	7	16	10	7	16	15	7	23	57	American.	Amer-Hawaiian Line.	407.0	53	07	Boston, Mass.	Seattle, Wash.	General.	3,282	7,156	5,094
Arizona.	7	13	40	8	6	10	8	13	07	French.	French Line.	425.0	55.0	20.2	Bordeaux, France.	Corral, Chile.	Iron, steel, gen.	1,075	7,090	4,929
Charles Christenson.	7	23	45	8	6	10	8	13	15	American.	Arrow Line.	409.7	54.0	15.0	Baltimore, Md.	Seattle, Wash.	General.	3,449	6,693	4,903
										² Motor ship.										
										³ Submarine.										
										⁴ Motor schooner.										
										⁵ Cruiser.										
										⁶ Lubricating oil and ethyl gas.										
										⁷ Cotton, carbon black, and rosin.										

⁷ Cotton, carbon black, and rosin.

⁶ Lubricating oil and ethyl gas.

⁵ Cruiser.

⁴ Motor schooner.

³ Submarine.

² Motor ship.

¹ Tanker.

Paul	8 00 45	8 7 05	8 14 12	8 15 10	American	Luckenbach Line	471.1	59.2	20.3	Portland, Me.	Mass	Seattle, Wash.	General	3,728	9,027	6,539
Luckenbach	8 1 00	8 7 20	8 14 35	8 15 35	American	Shepard S. S. Co.	409.0	54.2	16.0	Portland, Me.	Mass	Seattle, Wash.	General	3,300	6,553	4,753
Wind Rush	8 3 30	8 8 30	8 15 56	8 16 40	American	Dunson S. S. Corp.	410.5	54.3	16.0	Philadelphia, Pa.	Pa.	Tacoma, Wash.	General	1,736	6,583	4,808
Pacific Pine	8 7 10	8 9 25	8 16 43	8 17 00	American	Isthmian S. S. Lines	425.0	56.0	24.5	Philadelphia, Pa.	Pa.	Singapore, Stra. Set.	Steel, general	8,447	7,611	5,454
Steel Sealer	8 1 40	8 12 24	8 18 45	8 19 45	Panamanian	Barber S. S. Line	461.0	60.0	24.5	New York, N. Y.	N. Y.	Manila, P. I.	General, case oil	5,201	9,866	6,955
Tai Ping Yang	8 13 35	8 13 48	8 20 35	8 21 40	British	Reardon Smith Line	400.0	54.0	22.0	Pt. Arthur, Tex.	Texas	Shanghai, China	General	5,750	6,977	5,383
Prince Rupert	8 17 15	8 14 18	8 21 08	8 22 50	American	N. O. & S. A. S. S. Co.	324.0	46.2	19.2	Talcahuano, Chile	Chile	Talcahuano, Chile	General	1,674	3,981	3,600
City	8 19 55	8 6 15	9 14 35	9 17 20	British	Amer. & Australian Line	475.0	60.9	27.3	New York, N. Y.	N. Y.	Sydney, Australia	Sulphur, oil gen.	8,200	8,946	6,145
Noaa Queen	8 23 45	8 6 15	9 14 35	9 14 30	Japanese	Kokusai Kisen Kaisha	425.0	53.8	28.11	New York, N. Y.	N. Y.	Shanghai, China	Wheat, cotton	8,901	6,899	5,139
Tamaho Maru	9 4 00	8 7 25	9 15 44	9 16 50	British	Imperial Oil Co.	521.5	70.4	24.0	Halifax, N. S.	N. S.	Talara, Peru	Ballast	12,339	7,717	
Calgarolite	9 6 50	8 8 35	9 15 32	9 20 03	British	Eagle Oil & Ship. Co.	425.0	57.0	18.0	Southampton, Eng.	Eng.	San Luis, Calif.	Ballast	7,115	5,010	
Scottish	9 13 05	8 13 30	9 20 29	9 22 18	Yugoslav	Chilean Nitrate Prod.	425.0	55.3	14.0	Antwerp, Belgium	Belgium	Tocopilla, Chile	Ballast	6,367	4,324	
Musican	9 16 15	8 16 20	9 22 15	10 2 12	British	Bank Line, Ltd.	426.0	57.0	18.0	Baltimore, Md.	Md.	Shanghai, China	General	1,800	7,623	5,412
Vidovian	9 18 20	8 18 35	9 15 50	10 11 15	American	Luckenbach Line	425.0	57.3	25.0	Houston, Tex.	Texas	Tacoma, Wash.	General	4,283	8,568	6,048
Purri	9 10 40	10 5 50	10 16 38	11 11 36	American	U. S. Navy	462.0	60.0	25.0	Hampton Rds., Va.	Va.	Mare Island, Calif.	General	2,234		
Tamaho Maru	9 12 50	10 6 00	10 13 38	10 20 15	American	Grace Line	466.0	64.0	22.8	New York, N. Y.	N. Y.	Talcahuano, Chile	General	1,555	10,626	6,680
Edgar F.	10 5 50	10 7 15	10 14 11	10 21 30	American	Dollar Line	502.0	62.0	24.6	New York, N. Y.	N. Y.	San Francisco, Cal.	General	2,888	12,618	9,251
Nitro	9 18 50	10 7 15	10 15 12	10 16 15	American	Amer. Gulf Orient Line	410.0	56.0	27.11	New Orleans, La.	La.	Cebu, P. I.	Sulphur, pipe	8,325	8,904	6,196
Santa Maria	10 4 05	10 8 30	10 15 54	10 16 45	American	Isthmian S. S. Lines	424.0	56.0	18.0	Baltimore, Md.	Md.	Honolulu, T. H.	Steel, general	2,167	7,611	5,450
Harrison	9 18 05	10 9 35	10 17 03	10 18 10	American	United Fruit Co.	336.7	42.0	17.10	Cristobal, C. Z.	C. Z.	San Francisco, Cal.	Ballast	3,668	2,308	
Steel Ranger	9 10 15	10 9 40	10 17 45	10 19 48	American	Richfield Oil Co.	500.0	71.2	18.0	Miami, Fla.	Fla.	Los Angeles, Calif.	Ballast	11,967	8,542	
Saramacca	3 18 15	10 14 00	10 21 05	10 22 15	German	Roland Line	216.5	32.9	12.9	Cristobal, C. Z.	C. Z.	Guayaquil, Ecuador	General	337	1,132	741
Tamabua	10 14 15	10 14 30	10 22 30	11 6 02	British	International Pet. Co.	565.0	75.6	25.0	Halifax, N. S.	N. S.	Talara, Peru	Ballast	16,780	9,885	
Manizales	10 15 00	11 6 05	11 13 27	11 14 40	British	Shaw, Savill & Albion	477.8	61.1	29.5	London, England	England	New Zealand	General	3,680	10,657	7,617
C. O.	9 19 20	11 6 00	11 13 55	11 14 55	American	Panama Mail S. S. Co.	296.0	45.0	14 10	Pto. Colombia, Col.	Col.	San Francisco, Cal.	Coffee, general	432	3,848	2,606
Stallman	11 1 30	11 7 10	11 17 28	11 18 40	American	Amer.-Hawaiian Line	404.0	53.9	19.0	Boston, Mass.	Mass.	Portland, Oreg.	General	1,351	6,779	4,921
City of San	11 4 15	11 7 20	11 15 50	12 1 10	British	Can. Nat. Steamships	430.0	56.0	20.0	Montreal, Canada	Canada	Brisbane, Australia	General	3,402	7,680	5,494
Kusan	11 7 40	11 8 30	11 16 38	11 17 40	American	Argonaut S. S. Line	401.6	54.0	23.0	Baltimore, Md.	Md.	Vancouver, B. C.	Steel, general	5,364	6,745	4,562
Canadin	11 17 40	11 8 55	11 17 01	11 18 05	British	Pacific Steam Nav. Co.	215.0	23.3	14.9	Cristobal, C. Z.	C. Z.	Champerico, Guatemala	General	826	1,270	7,501
Constructor	11 00 05	11 12 30	11 18 58	11 21 09	German	Hamburg-American Line	458.0	58.0	17.10	Hamburg, Germany	Germany	Valparaiso, Chile	General	2,855	8,071	5,952
Santa Cecilia	11 12 35	11 14 05	11 20 58	11 22 15	Greek	Chilean Nitrate Prod.	400.0	52.0	22.00	Oran, Algeria	Algeria	Arica, Chile	General	5,724	4,232	
Salvador	10 12 05	11 17 15	12 13 05	12 14 05	American	Ore S. S. Corp.	349.0	72.0	22.00	Baltimore, Md.	Md.	Cruz Grande, Chile	Ballast	14,325	4,655	
Rhein																
Arachangelos																
Leborne																

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

* Ammunition ship.

* Tanker.

Mathew	4 18 36	5 5 53	5 13 35	5 13 35	American	Luckenbach Line	434.0	57.7	21.0	Portland, Oreg.	Oreg.	Mobile, Ala.	General	4,900	7,977	5,764
Luckenbach	5 5 42	5 7 21	5 14 50	5 14 50	American	Williams S. S. Corp.	415.0	55.7	26.0	Seattle, Wash.	Wash.	Baltimore, Md.	Lumber, general	9,080	7,750	5,805
Willkono	5 6 30	5 7 39	5 16 35	5 17 45	British	W. Runciman & Co.	420.0	54.0	28.0	Vancouver, B. C.	B. C.	Rotterdam, Holland	Wheat	9,964	6,963	5,008
Blythmoor																
Standard																
Arrow	5 11 20	5 12 14	5 20 05	5 20 05	American	Standard Transp. Co.	467.6	62.7	28.1	Los Angeles, Calif.	Calif.	New York, N. Y.	Fuel distillate	12,698	9,098	6,783

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.		Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	
Rochester ⁹	6	6.00	6	6.15	6	13.50	7	6.00	American.	U. S. Navy.	384 0	64 9	26 0		Balboa, C. Z.	Cristobal, C. Z.	Soya beans.	8,150	7,257
Neptunum	6	6.00	6	7.43	6	15.15	6	15.15	British.	H. A. Senter & Co.	400 3	55 3	27 0		Darien, P. I.	Copenhagen, Den.	Soya beans.	7,500	3,955
Queen Maud.	6	6.30	6	8.06	6	15.30	6	15.30	British.	E. I. DuPont & Co.	400 2	52 3	25 0		Teopilla, Chile.	Wilmington, N. C.	Nitrate of soda.		
Santa	6	5.45	6	10.36	6	17.10	7	1.20	American.	Grace Line	480 0	64 0	24 0		Talcahuano, Chile	New York, N. Y.	General.	4,062	10,487
Daustrerijk ¹⁰	6	10.45	6	11.43	6	19.00	6	23.10	Dutch.	Holland-America Line.	509 2	64 0	20 0		Rotterdam, Holland	Rotterdam, Holland	General, wheat.	9,573	11,721
Nordkap ¹⁰	6	11.25	6	12.12	6	20.15	6	20.15	Danish.	Canadian Transp. Co.	385 0	54 3	25 0		Vancouver, B. C.	Immingham, Eng.	General.	7,200	6,515
San Angelo.	6	15.00	6	15.44	6	22.40	6	22.40	American.	Pac-Atlantic S. S. Co.	409 5	54 2	24 0		Grays Harb., Wash.	Norfolk, Va.	General, lumber.	7,857	6,510
Guatemala.	6	7.25	6	7.36	6	13.15	8	19.15	American.	Panama Mail S. S. Co.	360 2	51 6	24 0		San Francisco, Cal.	New York, N. Y.	General, lumber.	2,549	5,797
Reginette ¹¹	6	23.00	7	6.53	7	14.53	7	14.53	British.	Imperial Oil Co., Ltd.	469 2	63 1	30 0		Lobos, Peru.	Halifax, N. S.	Crude oil.	11,592	9,328
Panama.	6	20.59	7	7.12	7	15.00	7	15.00	American.	Amer-Hawaiian Line.	407 7	53 7	22 0		Portland, Ore.	Boston, Mass.	General.	4,315	7,097
Vinland.	7	4.00	7	8.06	7	16.08	7	16.08	Norwegian.	Scand-Sav. Pacific Line.	368 5	53 7	24 0		Corral, Chile.	Antwerp, Belgium	General.	6,152	5,413
Point Andra.	7	7.50	7	8.43	7	16.15	7	16.15	American.	Gulf-Pac. Redwood Line	380 0	53 1	23 0		Portland, Ore.	Lake Charles, La.	Lumber, general.	4,808	5,667
Karina	7	8.45	7	9.43	7	17.25	7	17.25	American.	Luckenbach Line	468 3	55 1	27 0		Seattle, Wash.	Boston, Mass.	Lumber, general.	7,623	8,508
Immacuor ¹⁰	7	2.45	7	10.48	7	18.10	7	18.10	British.	Kerr Gifford & Co.	375 0	52 6	26 0		Portland, Ore.	Dublin, Ireland	Wheat.	7,400	6,055
Rotorua.	7	5.52	7	12.20	7	19.10	7	19.10	British.	N. Z. Shipping Co.	326 4	61 4	26 0		Seattle, Wash.	London, England.	Frozen, general.	5,357	12,846
American Star.	6	19.40	7	13.24	7	20.55	7	20.55	American.	Charles Nelson & Co.	386 8	52 2	24 0		Seattle, Wash.	Baltimore, Md.	Lumber, general.	6,634	5,609
Aria.	7	13.20	7	14.08	7	22.00	8	14.50	German.	West German Lloyd	331 0	46 0	20 0		Bremen, Germany	Bremen, Germany	Nitrate, general.	3,450	3,529
Creole Mite.	8	11.05	8	11.05	8	11.05	8	11.05	Venezuelan.	North Indian Oil Co.	325 0	55 0	10 2		Balboa, C. Z.	Maracaibo, Venez.	Ballast.	8,200	3,497
Amberton.	8	4.30	8	6.40	8	13.25	8	13.25	British.	R. Chapman & Sons	409 6	54 0	25 0		Vancouver, B. C.	London, England.	Wheat.	8,200	3,497
Queen City.	8	13.20	8	14.12	8	21.00	8	21.00	American.	Reardon Smith Line.	412 1	55 0	24 0		Vancouver, B. C.	London, England.	General.	7,000	7,022
San Angelito.	8	13.45	8	14.39	8	22.40	8	22.40	American.	Quaker S. S. Co.	410 9	54 2	25 0		Portland, Ore.	Philadelphia, Pa.	Lumber, general.	7,104	6,755
Bennekot.	8	14.35	8	15.23	8	23.45	8	23.45	Dutch.	Anglo-Saxon Pet. Co.	399 7	58 2	25 2		Corral, Chile.	Hamburg, Germany	General.	8,401	7,843
Solna.	7	8.30	8	19.50	9	11.15	9	13.20	Norwegian.	Royal Neth. S. S. Co.	380 8	53 3	26 0		Los Angeles, Calif.	Curacao, D. W. I.	Ballast.	7,980	6,252
Nordpol.	8	16.40	8	17.50	9	12.45	9	12.45	British.	Anglo-Saxon Pet. Co.	399 7	58 2	25 2		Vancouver, B. C.	British Channel	General.	2,477	2,656
Oueda.	7	10.15	9	6.24	9	13.55	9	13.55	Danish.	Canadian Transp. Co.	251 0	43 6	19 0		San Francisco, Cal.	New York, N. Y.	Lumber, autopls.	2,477	2,656
Treca.	7	10.15	9	6.24	9	13.55	9	13.55	American.	Ford Motor Co.	251 0	43 6	19 0		San Francisco, Cal.	New York, N. Y.	Lumber, autopls.	2,477	2,656
Rangitiki ¹⁰	8	20.50	9	10.19	9	17.20	9	17.20	British.	Shell Oil Co.	440 4	59 6	21 0		Bluff, N. Z.	Curacao, D. W. I.	Ballast.	5,288	18,197
Saramacca.	8	1.39	9	10.34	9	18.05	9	18.05	American.	N. Z. Shipping Co.	550 0	70 2	27 0		London, England.	Curacao, D. W. I.	Frozen, general.	5,288	18,197
Gothic Star.	9	12.05	9	12.40	9	20.25	10	3.10	British.	United Fruit Co.	336 7	42 0	19 0		San Francisco, Cal.	Cristobal, C. Z.	General, coffee.	5,281	5,068
Grainton.	9	16.45	9	17.39	10	11.30	10	11.30	British.	Blue Star Line, Ltd.	420 5	54 3	25 0		New Westminster, B. C.	Newcastle, Eng.	General.	5,976	7,521
Hofuku Maru.	10	2.15	10	7.10	10	14.25	10	16.10	Japanese.	Dale & Co.	423 0	50 3	26 0		Hull, England	Hull, England	Wheat, general.	9,710	6,823
Sidney M.	10	1.00	10	7.18	10	14.40	10	14.40	American.	Kokusai Kisen Kaisha.	385 0	51 0	27 0		Kobe, Japan.	East coast U. S. A.	Sugar.	7,600	6,212
Hamptun.	10	9.45	10	10.24	10	17.45	10	17.45	American.	Munson, McCork's Line.	401 4	53 2	27 0		Seattle, Wash.	Baltimore, Md.	(¹²)	7,352	7,082
Nosa Prince.	10	9.45	10	10.24	10	17.45	10	17.45	American.	N. O. & S. A. S. Co.	324 0	46 2	23 3		Talcahuano, Chile.	New Orleans, La.	(¹³)	4,152	3,083
Tuscaloosa	10	10.10	10	10.57	10	18.45	10	18.45	American.	Isthmian S. S. Lines.	441 1	56 0	25 0		Tacoma, Wash.	New York, N. Y.	Lumber, pulp.	7,069	7,611
Royal Arrow.	10	10.15	10	11.13	10	19.35	10	19.35	American.	Standard Transp. Co.	467 6	62 7	27 0		Los Angeles, Calif.	New York, N. Y.	Gasoline.	11,300	9,699

⁹ Tanker.¹⁰ Motor ship.¹¹ For orders.¹² Lumber and canned goods.¹³ Nitrate, beans, and coffee.

Durazo	10	12	00	10	13	06	10	20	15	German	Hamburg-American Line	227.5	34.4	13.5	Guayaquil, Ecuador	Cristobal, C. Z.	General	425	1,632	1,041
Santa Maria	10	15	35	10	13	55	13	6	00	American	Union Oil Co. of Calif.	400.0	60.3	30.0	San Francisco, Cal.	Cristobal, C. Z.	Gasoline	12,707	8,746	5,725
John P.	10	18	35	11	6	46	11	14	00	Norwegian	Anglo-Saxon Pet. Co.	420.8	58.5	25.2	San Francisco, Cal.	Lands End, Eng.	Gasoline	8,561	6,669	4,317
Pedersen	11	1	15	11	7	15	11	14	55	Yugoslav	Yugoslav Lloyd	403.0	52.6	25.0	Tocopilla, Chile	Aores	Nitrates	8,145	5,926	4,189
Tomislav	11	3	00	11	7	35	11	16	10	American	Panama R. & S. S. Line	251.0	43.6	18.0	Guayaquil, Ecuador	New York, N. Y.	General	1,468	2,874	1,944
Guayaquil	11	3	00	11	8	38	11	18	00	Norwegian	Fred Olsen & Co.	445.5	55.2	28.5	Vancouver, B. C.	London, England	Grain, general	9,332	7,563	5,637
Theodore	11	6	45	11	17	29	11	22	00	Japanese	Osaka Shosen Kaisha	425.0	60.6	23.0	Hongkong, China	Baltimore, Md.	Silk, general	6,334	9,852	6,272
Roosevelt	11	7	50	11	13	07	11	20	25	British	Andrew Weir & Co.	420.1	53.9	26.0	Antofagasta, Chile	Aores	Nitrates	8,300	7,097	5,022
Kimal Maru	11	12	50	11	13	27	11	21	20	Italian	Nav. Libera-Fristina	436.6	53.4	24.2	Vancouver, B. C.	Trieste, Italy	General	4,220	7,785	5,997
Forrestbank	11	13	10	11	14	00	11	22	20	Swedish	Johnson Line	426.0	56.0	26.10	Vancouver, B. C.	Gothenburg, Sweden	General	7,750	7,480	5,533

¹⁴ Diesel oil and gasoline.

¹⁵ Wheat, coffee, and fruits.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 5	No. 9688 ¹⁸	Pan American Airways.	San Salvador.	July 5	No. N. C. 300-N ¹⁸	Pan American-Grace Airways	Buenaventura, Colombia.
July 6	Magdalena ¹⁹	Hamburg-American Line.	Hamburg via waypoints.	July 5	No. N. C. 9665 ¹⁸	Pan American Airways	San Salvador.
July 6	Marstenen.	Ocean Dominion S. S. Co.	Tampa, Fla.	July 5	No. N. C. 667-M ¹⁸	Pan American Airways	Miami via Barraquilla.
July 7	Pellerin de Latouche	French Line.	Havre via waypoints.	July 5	Cristobal.	Panama R. R. S. S. Line.	New York via Haiti.
July 7	No. 300-N ¹⁸	Pan American-Grace Airways	Buenaventura, Colombia.	July 5	Swiftscout.	C. D. Mallory & Co.	Curacao, D. W. I.
July 7	Tillie Lykes.	Lykes Brothers	Houston, Texas.	July 8	No. 9688 ¹⁸	Pan American Airways	San Salvador and waypoints.
July 8	Sixola.	United Fruit Co.	Colombian ports.	July 8	No. 669-M ¹⁸	Pan American Airways	Miami via waypoints
July 8	Zacapa.	United Fruit Co.	New Orleans, La.	July 8	Magdalena.	Hamburg-American Line.	Port Limon, Costa Rica.
July 8	Carmelita ¹⁶	Standard Fruit & S. S. Co.	New York via Kingston.	July 8	Sixola.	United Fruit Co.	New York via Kingston.
July 8	Anechucua ¹⁷	A. Tagaropoulos	Colon, Rep. of Panama.	July 8	Tillie Lykes.	Lykes Brothers	Sto. Domingo via waypoints.
July 8	Inapachina ¹⁷	Colon, Rep. of Panama	Colon, Rep. of Panama	July 8	Carmelita ¹⁶	Standard Fruit & S. S. Co.	Colon, Rep. of Panama.
July 9	Martinique	Colon, Rep. of Panama	Colon, Rep. of Panama	July 8	Inapachina ¹⁷	A. Tagaropoulos	Colon, Rep. of Panama.
July 9	Pafuazo ¹⁶	New York via waypoints.	New York via waypoints.	July 8	Anechucua ¹⁷	United Fruit Co.	Port Limon, Costa Rica.
July 10	Calameres	Bluefield, Nicaragua.	Bluefield, Nicaragua.	July 9	Irona.	United Fruit Co.	Colombian ports.
July 10	Cannetta ¹⁷	New Orleans via Panama.	New Orleans via Panama.	July 9	Zacapa.	Pan American-Grace Airways	Pinarual via waypoints.
July 10	Anechucua ¹⁷	Colon, Rep. of Panama	Colon, Rep. of Panama.	July 9	No. 945-M ¹⁸	P. W. Hamilton.	Colon, Rep. of Panama.
July 11	United Fruit Co.	Port Limon, Costa Rica.	Port Limon, Costa Rica.	July 10	Ametia I. ¹⁷	French Line.	Havre via waypoints.
July 11	Magdalena.	Colon, Rep. of Panama	Colon, Rep. of Panama	July 10	Pellerin de Latouche	Colombian S. S. Line.	New York via waypoints.
July 11	Pearl Marie ¹⁶	Hamburg-American Line	San Salvador and waypoints.	July 10	Martinique	Colombian S. S. Line.	New York via waypoints.
July 11	No. 9604 ¹⁸	Pan American Airways	Miami via waypoints.	July 10	Calameres	United Fruit Co.	New Orleans via waypoints.
July 11	No. 667-M ¹⁸	Pan American Airways	Miami via waypoints.	July 11	Irona.	United Fruit Co.	New Orleans via waypoints.
July 11	No. 945-M ¹⁸	Pan American-Grace Airways	Pinarual via waypoints.	July 11	Cefalu.	Standard Fruit & S. S. Co.	New Orleans via waypoints.
July 11				July 11	Estuerzo ¹⁶	Standard Fruit & S. S. Co.	Bluefields, Nicaragua.
July 11				July 11	Pearl Marie ¹⁶	G. I. Bryan.	Bluefields, Nicaragua.

¹⁶ Motor schooner.

¹⁷ Motor boat.

¹⁸ Air mail carrier.

¹⁹ Motor ship.

PORT OF BALBOA.

July 4	Nora ¹	Arrow Oil Co.	Los Angeles, Calif.	July 5	Nora ¹	Arrow Oil Co.	Corinto, Nicaragua.
July 8	Nueva Panama.	Hans Elliott.	Panama, Rep. of Panama.				
July 11	Rakuyo Maru.	Nippon Yusen Kaisha.	Hongkong, China.				

* Tanker.

* Other than ships passing through the Canal.

Commercial Traffic Through the Panama Canal in June, 1931, by Trade Routes.

The following tabulation shows the commercial traffic through the Canal during the month of June, 1931, classified according to trade routes and nationality of vessels in each trade route, together with corresponding totals for June, 1930 and 1929. The amount of cargo shown is the amount carried by vessels operating over the respective routes and in some cases includes cargo having other destinations:

ATLANTIC TO PACIFIC.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States intercoastal:							
United States.....	66	370,551	277,720	449,305	278,514	\$321,184.00	165,917
Europe to Canada:							
Belgian.....	1	4,030	3,214	5,045	3,140	2,901.60	
British.....	15	82,670	58,578	95,763	58,796	64,512.56	12,596
Danish.....	4	26,045	19,198	32,638	20,429	20,187.79	4,339
Dutch.....	1	8,266	6,197	10,220	6,385	7,746.25	2,670
French.....	1	7,110	3,865	8,062	4,295	4,831.25	1,353
German.....	3	19,658	12,782	22,256	13,198	15,977.50	6,759
Italian.....	2	12,125	9,006	14,970	9,451	11,257.50	2,083
Norwegian.....	2	11,527	8,126	13,074	8,213	10,157.50	5,494
Swedish.....	2	10,404	6,296	10,518	7,911	7,870.00	7,406
Total.....	31	181,835	127,262	212,596	131,818	145,441.95	42,700
Europe to South America:							
British.....	5	27,677	21,044	35,774	21,853	25,477.82	11,575
Chilean.....	2	156	64	722	244	80.00	
Danzig.....	1	8,224	7,068	12,175	6,974	5,921.28	
Dutch.....	3	16,908	9,677	16,883	9,543	11,534.43	3,803
French.....	1	5,167	3,281	5,541	3,262	4,101.25	1,935
German.....	5	25,259	19,060	30,045	18,317	23,825.00	9,187
Italian.....	1	9,373	5,223	11,669	6,779	6,528.75	1,095
Norwegian.....	1	3,925	3,118	5,113	3,125	3,897.50	4,283
Yugoslav.....	2	9,948	7,158	11,748	7,122	7,162.56	
Total.....	21	106,637	75,693	129,670	77,219	88,528.59	31,878
United States to Far East:							
British.....	6	34,368	21,939	37,758	22,406	27,423.75	22,506
Japanese.....	7	37,950	31,352	47,482	31,039	39,022.50	30,112
Norwegian.....	3	16,588	8,855	15,893	9,083	11,106.25	16,331
United States.....	3	21,429	16,284	26,863	16,237	20,355.00	19,108
Total.....	19	110,335	78,460	127,996	78,765	97,907.50	88,107
United States to South America:							
British.....	4	13,958	11,323	18,114	11,276	11,514.12	1,200
Chilean.....	1	4,672	3,433	7,310	3,976	4,291.25	1,111
Swedish.....	2	8,917	7,486	30,676	8,762	6,420.24	
United States.....	7	31,244	22,864	41,373	22,808	26,297.00	8,781
Total.....	14	58,791	45,106	97,473	46,822	48,522.61	11,092
Cristobal to South America:							
Colombian.....	4	570	550	880	550	668.90	475
Dutch.....	1	742	294	780	323	367.50	54
German.....	4	3,491	2,260	4,347	2,334	2,825.00	1,166
Total.....	9	4,803	3,104	6,007	3,207	3,861.40	1,695
Europe to United States:							
German.....	1	6,344	3,826	6,780	4,057	4,782.50	2,775
Japanese.....	1	4,746	4,387	4,726	2,701	3,417.12	
Norwegian.....	2	9,040	6,469	10,752	6,430	6,508.80	
Swedish.....	1	6,098	3,302	5,819	4,061	4,127.50	
United States.....	1	8,619	7,026	11,247	6,954	6,205.68	
Total.....	6	34,847	25,010	39,324	24,203	25,041.60	2,775
Europe to Australasia:							
British.....	5	48,828	33,125	57,297	34,777	41,406.25	18,853
French.....	1	3,772	3,087	4,517	2,728	3,858.75	2,762
Total.....	6	52,600	36,212	61,814	37,505	45,265.00	21,615

ATLANTIC TO PACIFIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to Canada:							
Norwegian.....	1	4,561	2,923	4,904	2,939	\$3,653.75	6,935
United States.....	3	16,270	13,500	20,010	13,486	16,647.95	12,684
Total.....	4	20,831	16,423	24,914	16,425	20,301.70	19,619
United States to Philippine Islands:							
British.....	1	6,145	3,490	6,734	3,656	4,362.50	3,043
Danish.....	1	4,066	3,142	5,177	3,199	3,927.50	3,465
United States.....	2	11,761	9,305	13,359	8,393	11,631.25	13,925
Total.....	4	21,972	15,937	25,300	15,248	19,921.25	20,433
United States to Australasia:							
British.....	4	19,725	13,095	21,405	13,423	16,030.99	11,415
Cristobal to Central America:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,794
Panamanian.....	1	22	24	45	29	26.40	46
Total.....	3	1,463	1,310	2,343	1,333	1,633.90	1,840
Around the world:							
United States.....	3	28,930	21,052	35,144	21,052	26,315.00	6,830
Cristobal to United States:							
United States.....	2	4,402	4,014	6,907	4,102	3,169.44	.....
Canada to South America:							
British.....	2	14,470	12,491	23,250	12,051	10,418.40	.....
West Indies to Canada:							
British.....	2	6,706	4,490	7,485	4,486	5,612.50	11,573
Cristobal to Balboa:							
United States.....	2	161	173	98	67	145.50	.....
Foreign vessels without cargo— United States inter- coastal:							
Danish.....	1	5,064	2,750	4,732	2,865	3,437.50	.....
United States to Hawaii:							
United States.....	1	5,249	3,847	6,188	3,822	4,808.75	5,489
Canada to United States:							
Norwegian.....	1	4,757	2,850	4,791	2,864	3,562.50	4,765
Canadian intercoastal:							
British.....	1	4,073	3,258	5,482	3,375	4,072.50	5,310
Canada to Australasia:							
British.....	1	4,491	3,294	5,458	3,352	4,117.50	4,201
Central America to Canada:							
British.....	1	58	47	70	47	41.76	.....
South America to United States:							
United States.....	1	2,603	1,351	2,435	1,351	1,688.75	897
South America to Canada:							
United States.....	1	4,989	3,517	5,550	3,517	4,396.25	3,097
South America to Far East:							
Japanese.....	1	7,354	5,958	9,455	5,902	7,447.50	5,887
West Indies to United States:							
United States.....	1	4,969	3,547	5,688	3,561	4,433.73	4,132
Europe to Central America:							
German.....	1	3,467	2,213	3,979	2,280	2,766.25	1,511
Egypt to South America:							
British.....	1	5,140	3,640	5,840	3,624	3,700.80	.....
Grand total, June, 1931.....	210	1,091,273	793,824	1,330,699	802,800	923,775.14	472,778
Grand total, June, 1930.....	259	1,291,603	980,994	1,633,780	992,514	1,099,764.87	699,652
Grand total, June, 1929.....	272	1,287,393	977,989	1,604,457	981,038	1,117,940.01	899,386

* Includes barge having no registered tonnage.

PACIFIC TO ATLANTIC.

United States intercoastal:							
United States.....	63	347,557	266,953	432,567	267,579	\$333,691.25	473,115
Canada to Europe:							
Belgian.....	1	3,965	3,163	4,983	3,643	3,953.75	7,176
British.....	23	111,065	80,488	130,181	80,664	100,610.00	186,203
Danish.....	2	13,027	10,328	14,081	8,803	12,910.00	19,993
Dutch.....	1	6,060	4,860	7,651	4,796	6,075.00	9,633
French.....	1	7,027	3,873	8,061	4,295	4,841.25	7,253
German.....	3	20,295	13,360	22,941	13,928	16,700.00	26,231
Italian.....	1	5,806	4,401	7,549	4,720	5,501.25	8,011
Norwegian.....	4	19,515	12,077	20,177	12,308	15,096.25	29,765
Swedish.....	1	5,661	3,406	5,652	4,320	4,257.50	7,627
Total.....	37	192,421	135,956	221,276	137,477	169,945.00	301,892

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
South America to Europe:							
Belgian.....	1	4,792	4,142	6,511	4,172	\$5,177.50	8,100
British.....	5	28,420	21,559	36,359	22,359	26,948.75	33,079
Danzig.....	1	8,224	7,068	12,175	6,974	8,835.00	15,799
Dutch.....	2	9,100	5,121	8,763	5,328	6,401.25	12,727
French.....	1	4,834	3,223	5,390	3,219	4,028.75	8,285
German.....	6	29,974	20,246	32,564	19,872	25,897.50	39,927
Italian.....	1	9,329	5,176	11,718	6,750	6,470.00	1,590
Norwegian.....	1	3,797	3,039	5,041	3,101	3,798.75	6,254
Total.....	18	98,470	69,574	118,521	71,775	86,967.50	125,761
South America to United States:							
British.....	1	4,326	3,707	5,841	3,720	4,633.75	7,957
Chilean.....	1	4,705	3,466	7,310	3,976	4,332.50	1,171
Danish.....	1	4,467	2,690	4,473	2,737	3,362.50	8,000
Swedish.....	1	4,496	3,743	15,337	4,385	4,678.75	21,650
United States.....	9	40,337	30,509	54,694	30,407	37,683.00	69,287
Total.....	13	58,331	44,115	87,655	45,225	54,690.50	108,065
Australasia to Europe:							
British.....	11	90,820	64,458	104,810	64,970	80,572.50	53,053
French.....	1	3,797	3,089	5,106	3,077	3,861.25	3,570
Total.....	12	94,617	67,547	109,916	68,047	84,433.75	56,623
South America to Cristobal:							
Colombian.....	4	570	550	880	550	674.90	958
Dutch.....	1	742	294	780	323	367.50	420
German.....	4	3,491	2,260	4,347	2,334	2,825.00	2,966
Total.....	9	4,803	3,104	6,007	3,207	3,867.40	4,344
Philippine Islands to United States:							
Danish.....	1	5,523	3,091	5,086	3,168	3,863.75	7,484
Japanese.....	2	10,381	8,706	12,836	8,534	10,882.50	16,521
Norwegian.....	2	11,421	6,432	10,855	6,465	8,040.00	12,975
United States.....	3	20,128	16,362	26,884	16,905	20,452.50	22,120
Total.....	8	47,453	34,591	55,661	35,072	43,238.75	59,100
United States to Europe:							
British.....	4	13,163	10,583	18,247	10,772	13,126.72	21,124
Norwegian.....	1	5,667	4,869	8,202	4,855	6,086.25	10,762
Total.....	5	18,830	15,452	26,449	15,627	19,212.97	31,886
Far East to United States:							
Japanese.....	2	13,028	10,372	16,964	10,240	12,965.00	10,115
United States.....	2	16,449	13,808	21,088	13,662	17,260.00	12,503
Total.....	4	29,477	24,180	38,052	23,902	30,225.00	22,618
United States to Cristobal:							
United States.....	2	4,402	4,014	7,021	3,984	5,017.50	1,949
United States to South America:							
United States.....	2	7,652	4,896	8,038	4,897	6,120.00	8,193
Canadian intercoastal:							
British.....	2	8,229	6,523	11,151	6,884	8,153.75	11,351
Central America to Cristobal:							
British.....	2	1,441	1,286	2,298	1,304	1,607.50	1,260
South America to Canada:							
British.....	2	13,694	13,267	23,250	12,051	15,613.75	32,173
Far East to Europe:							
French.....	1	4,724	3,663	5,961	3,657	4,578.75	7,958
Norwegian.....	1	4,706	2,494	4,301	2,519	3,117.50	7,124
Total.....	2	9,430	6,157	10,262	6,176	7,696.25	15,082
Balboa to Cristobal:							
Colombian.....	1	60	49	97	49	43.20	40
Panamanian.....	1	22	24	45	29	30.00	40
Total.....	2	82	73	142	78	73.20	40
United States to Central America:							
Danish.....	1	1,879	1,144	1,909	1,172	1,430.00	2,424

PACIFIC TO ATLANTIC.—Continued.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
United States to West Indies:							
Norwegian.....	1	6,839	5,607	9,215	5,314	\$7,008.75	12,491
Central America to United States:							
German.....	1	3,370	2,515	4,159	2,535	2,426.40	.....
South America to Central America:							
British.....	1	4,546	3,916	6,233	3,948	3,273.12	.....
Hawaii to Europe:							
Swedish.....	1	4,860	2,781	4,960	3,665	3,476.25	6,098
Australasia to Canada:							
British.....	1	4,139	3,254	5,448	3,336	4,067.50	3,203
Far East to West Indies:							
Danish.....	1	4,751	4,318	4,488	2,738	5,397.50	8,530
Grand total, June, 1931.....	190	967,273	721,223	1,194,678	726,193	897,633.59	1,286,198
Grand total, June, 1930.....	219	1,066,634	803,976	1,337,332	812,704	1,001,229.66	1,447,529
Grand total, June, 1929.....	231	1,065,038	809,790	1,341,724	815,965	1,009,865.96	1,524,616

United States Intercoastal Traffic by Commodities for June, 1931.

The following table shows the cargo carried through the Canal in the United States intercoastal trade, segregated by commodities and by direction, with the total for June, 1931, and the totals for June, 1930 and 1929. Cargo statistics are compiled from cargo declarations submitted by masters of vessels, and in these declarations small items are frequently grouped under the designation of "General cargo." These statistics are accordingly not precise, but they are indicative of the kind and quantity of the cargo in transit through the Canal. These figures represent tons of 2,240 pounds, and are for the United States intercoastal trade only:

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Agricultural implements.....	226	130	356
Alfalfa.....		579	579
Alfalfa meal.....		660	660
Ammonia.....	60		60
Asbestos.....	54		54
Asphalt.....	709	30	739
Automobiles.....	5,213	213	5,426
Automobile accessories.....	1,214	132	1,346
Bamboo.....		7	7
Bark.....		10	10
Barley.....	13	18	31
Beans.....	16	2,322	2,338
Borax.....		735	735
Bricks.....		54	54
Burlap.....	296	90	386
Calcium carbide.....	141		141
Camphor.....		48	48
Canned:			
Fish.....	445	8,773	9,218
Fruit.....	862	23,753	24,615
Meat.....	70	188	258
Milk.....	18	754	772
Soup.....	1,182		1,182
Vegetables.....	1,151	2,319	3,470
Miscellaneous and unclassified.....	919	5,472	6,391
Carbon black.....	22		22
Celite filtercel.....		874	874
Cement.....	529		529
Charcoal.....	197	87	284
Chemicals.....	2,892	574	3,466
China and fire clay.....	30	135	165
Coal.....	2,279		2,279
Cocoa.....	33		33
Cocoanuts.....	15	563	583
Coffee.....	277	129	406
Coke.....	505		505

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Cold storage:			
Cheese.....	24	31	55
Eggs.....	3	64	64
Fish.....	2	3	3
Lard.....	14	14	14
Other.....	187	187	187
Confectionery.....	550	10	560
Cork.....	24	24	24
Cotton.....	105	1,937	2,042
Cottonseed oilcake.....	224	224	224
Cyanide.....	83	83	83
Drugs and medicines.....	1,497	57	1,554
Earthenware.....	84	57	141
Eggs, dried.....	155	155	155
Explosives.....	123	123	123
Fertilizer.....	200	200	200
Flour.....	364	5,743	6,107
Fruit:			
Dried.....	7,075	7,075	7,075
Fresh.....	1,126	1,126	1,126
Fuller's earth.....	55	55	55
Furniture.....	523	81	604
General.....	23,746	11,299	35,045
Glass and glassware.....	2,371	83	2,454
Glue.....	86	142	228
Granite.....	35	35	35
Graphite.....	28	28	28
Guano.....	42	42	42
Gum.....	17	17	17
Hair.....	12	26	38
Hardwoods.....	343	343	343
Hay.....	161	161	161
Hemp.....	252	252	252
Hops.....	95	95	95
Infusorial earth.....	418	418	418
Ink.....	40	40	40
Kapok.....	134	134	134
Lard substitute.....	312	312	312
Lime.....	15	15	15
Linoleum.....	299	299	299
Liquors.....	156	10	166
Livestock.....	50	50	50
Lumber.....	2,193	156,068	158,261
Malt.....	147	147	147
Manufactured goods:			
Iron and steel.....	53,678	315	53,993
Machinery.....	3,457	1,247	4,704
Railroad material.....	3,319	3,319	3,319
Tinplate.....	8,041	63	8,104
Textiles.....	5,065	371	5,436
Miscellaneous.....	10,162	1,766	11,928
Marble.....	9	9	9
Matches.....	267	24	291
Metals:			
Antimony.....	18	18	18
Copper.....	9	3,529	2,538
Iron.....	457	5	462
Lead.....	1,115	1,115	1,115
Scrap.....	631	357	988
Tin.....	5	5	5
Zinc.....	18	509	527
Other.....	60	60	60
Milk, powdered.....	37	558	595
Molasses.....	120	120	120
Musical instruments.....	10	10	10
Nitrates.....	149	149	149
Nuts.....	724	724	724
Oats.....	66	66	66
Oils:			
Cottonseed.....	291	291	291
Crude.....	8,457	8,457	8,457
Gasoline, benzine, naphtha.....	154,831	154,831	154,831
Kerosene.....	6,249	6,249	6,249
Linseed.....	20	20	20
Lubricating and greases.....	7,524	2,321	9,845
Olive.....	15	15	15
Vegetable.....	300	106	406
Other.....	30	30	30
Ores:			
Iron.....	101	101	101
Magnesite.....	1,097	1,097	1,097
Other.....	200	200	200
Paint.....	626	60	686
Paper.....	7,041	7,906	14,947
Paper pulp.....	74	5,190	5,264

Commodity.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Paper roofing.....	155	.....	155
Peanuts.....	358	1,522	1,880
Peas.....	.....	27	27
Phosphates.....	1,839	.....	1,839
Porcelain.....	92	146	238
Quicksilver.....	.....	35	35
Rags.....	.....	328	328
Rice.....	131	48	179
Rope.....	187	234	421
Rosin.....	877	.....	877
Rubber:			
Manufactured.....	1,974	131	2,105
Raw.....	32	114	146
Scrap.....	.....	160	160
Salt.....	152	.....	152
Sand.....	466	.....	466
Seeds:			
Canary.....	17	.....	17
Hemp.....	.....	81	81
Other.....	.....	727	727
Shells.....	883	.....	883
Silk.....	.....	771	771
Skins and hides.....	.....	2,435	2,435
Slate.....	22	.....	22
Soap.....	2,014	150	2,164
Soda.....	299	.....	299
Soda ash.....	552	.....	552
Soda, bicarbonate.....	65	.....	65
Soda, caustic.....	435	.....	435
Starch.....	115	.....	115
Sugar.....	130	19,966	20,096
Sulphur.....	8,143	.....	8,143
Syrup.....	171	30	201
Talc.....	36	44	80
Tallow.....	.....	345	345
Tar.....	42	.....	42
Tea.....	.....	23	23
Tobacco.....	840	121	961
Toys.....	21	.....	21
Turpentine.....	97	.....	97
Vegetables.....	.....	90	90
Waste.....	58	120	178
Wax.....	124	135	259
Wheat.....	.....	53	53
Wine.....	.....	162	162
Wool.....	.....	10,907	10,907
Zinc oxide.....	125	.....	125
Total, June, 1931.....	184,042	461,038	645,080
Total, June, 1930.....	246,048	526,100	772,148
Total, June, 1929.....	274,074	582,630	856,704

Comparison of Canal Traffic in June, 1931, with June Traffic in Previous Years.

Commercial traffic through the Canal during the month of June, 1931, with 400 transits, was the lowest June traffic with respect to the number of transits since 1925, when 368 commercial vessels were transited. The aggregate net tonnage (Panama Canal measurement) of 2,058,546 of the 400 vessels transiting last month was the lowest June tonnage since 1926, when a total of 1,990,344 net tons (in 419 vessels) were passed through. The cargo tonnage passing through in the past month, 1,758,976 tons, was the lowest June cargo tonnage since 1922, just prior to the beginning of the heavy mineral oil movement from California.

In comparison with June, 1930, traffic for the past month declined 78 transits (16.3 per cent), 299,691 net tons (12.7 per cent), and 388,205 cargo tons (18.1 per cent), and in comparison with June, 1929, decreased 103 transits (20.0 per cent), 293,885 net tons (12.5 per cent), and 665,026 cargo tons (27.4 per cent).

In the tabulation below are shown the number of transits, net tonnage (Panama Canal measurement), and the tons of cargo carried

through the Canal during the month of June each year from 1915 to 1931, inclusive, and for comparison the monthly averages for the corresponding fiscal year ending June 30 following:

Calendar year.	Month of June.			Fiscal year.	Average per month for fiscal year.		
	Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.		Commer- cial transits.	Panama Canal net tonnage.	Tons of cargo.
1915.....	142	498,084	567,285	1915.....	102	361,197	465,567
1916.....	121	381,256	482,767	1916.....	63	199,687	257,843
1917.....	170	528,614	630,638	1917.....	150	483,213	588,213
1918.....	169	573,944	629,210	1918.....	172	547,839	627,669
1919.....	161	517,442	586,887	1919.....	169	510,416	576,385
1920.....	201	704,712	834,421	1920.....	206	712,170	781,208
1921.....	192	761,477	694,720	1921.....	241	951,323	966,601
1922.....	228	970,713	977,478	1922.....	228	951,455	907,075
1923.....	417	2,035,902	2,096,446	1923.....	331	1,550,482	1,630,656
1924.....	377	1,928,039	2,022,850	1924.....	436	2,179,073	2,249,559
1925.....	368	1,753,327	1,920,323	1925.....	389	1,904,596	1,996,570
1926.....	419	1,990,344	2,134,686	1926.....	433	2,064,549	2,169,787
1927.....	455	2,152,926	2,229,097	1927.....	456	2,185,651	2,312,351
1928.....	481	2,227,865	2,139,565	1928.....	538	2,454,886	2,469,226
1929.....	503	2,352,431	2,424,002	1929.....	534	2,468,483	2,555,250
1930.....	478	2,358,237	2,147,181	1930.....	515	2,498,385	2,502,519
1931.....	400	2,058,546	1,758,976	1931.....	461	2,316,012	2,090,233

¹ Canal opened August 15, 1914.

² Average for 10½ months.

Report of Cargo Discharged and Laded by Vessels Entering and Clearing from Port of Cristobal, C. Z., for Week Ending July 11, 1931.

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Cristobal.....	Panama R. R. & S. S. Line.....	July 5.....	July 5.....		989
Baralt.....	Royal Netherlands S. S. Co.....	July 5.....	July 5.....		174
Margaret Johnson.....	Johnson Line.....	July 5.....	July 5.....		83
Reina del Pacifico.....	Pacific Steam Navigation Co.....	July 5.....	July 5.....		21
San Vincente.....	Quaker S. S. Line.....	July 5.....	July 6.....	120	(¹)
Ecuador.....	Panama Mail S. S. Co.....	July 6.....	July 6.....		752
Canea.....	National Navigation Co.....	July 6.....	July 6.....		65
Brielle.....	Royal Netherlands S. S. Co.....	July 6.....	July 6.....	142	41
Damsterdijk.....	Holland-America Line.....	July 6.....	July 6.....	(²)	36
Santa Barbara.....	Grace Line.....	July 6.....	July 7.....	90	638
Donau.....	North German Lloyd.....	July 6.....	July 7.....	60	262
Marstenen.....	Aluminium S. S. Line.....	July 6.....	July 7.....	628	(²)
Magdalena.....	Hamburg-American Line.....	July 6.....	July 8.....	140	61
Tillie Lykes.....	Lykes Brothers.....	July 7.....	July 8.....	365	155
Nosa Queen.....	N. O. & S. A. S. S. Co.....	July 7.....	July 8.....	290	226
Guatemala.....	Panama Mail S. S. Co.....	July 7.....	July 8.....	1,167	(¹)
Arizona.....	French Line.....	July 7.....	July 8.....	43	60
Arta.....	North German Lloyd.....	July 7.....	July 8.....	3½	210
Anachucuna.....	A. Tagaropoulos.....	July 7.....	July 8.....	32	(²)
Pellerin de Latouche.....	French Line.....	July 7.....	July 9.....	143	771
Tai Ping Yang.....	Barber S. S. Line.....	July 8.....	July 8.....	(¹)	79
Irioua.....	United Fruit Co.....	July 8.....	July 8.....	662	(²)
Sixaola.....	United Fruit Co.....	July 8.....	July 8.....	32	319
Zacapa.....	United Fruit Co.....	July 8.....	July 9.....	803	185
Bennekom.....	Royal Netherlands S. S. Co.....	July 8.....	July 9.....	134	150
Martinique.....	Colombian S. S. Line.....	July 9.....	July 10.....	(¹)	144
Esfuerzo.....	J. Asmusen.....	July 9.....	July 10.....	10	26½
City of San Francisco.....	Panama Mail S. S. Co.....	July 9.....	July 10.....	98	164
Santa Maria.....	Grace Line.....	July 9.....	July 10.....	389	144
Saramacca.....	United Fruit Co.....	July 9.....	July 10.....	579	(²)
President Harrison.....	Dollar Line.....	July 10.....	July 10.....	(¹)	2
Manizales.....	Roland Line.....	July 10.....	July 10.....		338
Calamares.....	United Fruit Co.....	July 10.....	July 10.....	351	46½
Nosa Prince.....	N. O. & S. A. S. S. Co.....	July 10.....	July 10.....	(¹)	385
Cefalu.....	Standard Fruit & S. S. Co.....	July 10.....	July 11.....	247	241
Durazzo.....	Hamburg-American Line.....	July 10.....	July 10.....	425	
Pearl Marie.....	R. Feuillebois.....	July 11.....	July 11.....	(¹)	26
Rhein.....	Hamburg-American Line.....	July 11.....	July 11.....	73	122
Irioua.....	United Fruit Co.....	July 11.....	July 11.....	10	44
Chile.....	Danish East Asiatic Co.....	July 11.....	July 11.....	101	
Kinai Maru.....	Osaka Shosen Kaisha.....	July 11.....	July 11.....	288	33
Santa Maria.....	Union Oil Co.....	July 11.....	July 11.....	11,282	
Guayaquil.....	Panama R. R. & S. S. Line.....	July 11.....	July 11.....	386	(²)
Buenaventura.....	Panama R. R. & S. S. Line.....	July 11.....	July 11.....	791	
Salvador.....	Pacific Steam Navigation Co.....	July 11.....	July 11.....		830

¹ No cargo discharged.

² No cargo laded.

³ One case.

⁴ One package.

THE PANAMA CANAL RECORD

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Certificate.—By direction of the Governor of The Panama Canal the matter contained herein is published as statistical information and is required for the proper transaction of the public business.

Volume XXIV.

Balboa Heights, C. Z., July 22, 1931.

No. 51.

Panamá Canal Traffic During the Fiscal Year 1931, Segregated by Nationality of Vessels.

Commercial traffic through the Panama Canal in the fiscal year 1931, was made up of 19 nationalities. Transits of vessels of the United States registry, totaling 2,417, exceeded those of any other nationality, with British, German, Norwegian, Japanese, Dutch, Danish, Swedish, and French following in order named. The vessels of these 9 nationalities made up 93.8 per cent of the total transits, 95.8 per cent of the net tonnage (Panama Canal measurement), paid 95.8 per cent of the tolls collected, and carried 96.4 per cent of the total cargo during the year.

The following statement shows the commercial traffic through the Canal during the fiscal year 1931, segregated according to registry of vessels, with the grand totals for the two preceding fiscal years:

TOTAL NATIONALITY TRAFFIC FOR FISCAL YEAR 1931.

Nationality.	No. of ships.	TONNAGE.				Tolls.	Tons of cargo.
		Panama Canal net.	United States equivalent.	Registered gross.	Registered net.		
Belgian.....	24	124,377	98,074	152,535	95,997	\$116,452.51	156,411
British.....	1,390	7,513,171	5,494,150	9,112,341	5,558,611	6,580,987.70	5,971,281
Chilean.....	42	170,928	122,226	244,552	136,747	166,782.50	99,234
Colombian.....	104	15,526	15,030	23,562	15,036	17,840.61	17,847
Danish.....	120	611,380	434,337	697,487	439,570	519,535.67	606,100
Danzig.....	27	184,928	153,853	260,698	147,527	165,459.25	185,982
Dutch.....	125	578,680	383,469	643,802	385,968	473,269.39	477,769
French.....	110	609,915	432,486	736,590	437,281	523,263.93	508,011
German.....	369	1,412,256	979,905	1,657,275	986,522	1,204,084.62	1,261,763
Greek.....	8	30,965	21,578	34,598	21,457	26,342.87	45,223
Italian.....	67	468,239	330,590	603,987	360,287	404,674.43	236,570
Japanese.....	193	1,019,832	856,815	1,294,940	841,343	1,052,413.33	1,104,512
Norwegian.....	363	1,748,728	1,203,067	2,002,601	1,204,848	1,403,922.86	1,720,383
Panamanian.....	36	82,841	50,180	86,913	50,884	60,204.86	55,422
Peruvian.....	2	7,088	7,020	10,124	5,788	8,565.60	7,328
Spanish.....	9	22,650	18,149	28,515	17,500	22,053.99	27,030
Swedish.....	111	528,282	372,389	962,881	454,798	424,924.05	721,945
United States.....	2,417	12,601,828	9,580,909	15,613,163	9,567,459	11,425,999.31	11,805,132
Yugoslav.....	12	55,532	40,962	66,260	40,838	48,679.09	74,807
Total, 1931.	5,529	27,792,146	20,595,189	34,232,824	20,768,461	24,645,456.57	25,082,800
Total, 1930.	6,185	29,980,614	22,683,006	37,430,657	22,797,619	27,076,890.01	30,030,232
Total, 1929.	6,413	29,837,794	22,793,847	37,464,792	22,900,317	27,127,376.91	30,663,006

As related to the total traffic and as compared with the fiscal year 1930, the classification by nationality is more clearly shown in the following tabulation in which the percentage of the fiscal years' traffic (1930 and 1931) is substituted for actual figures. In the tabulation, figures are shown for only those nationalities contributing 500,000 or more net tons, Panama Canal measurement, others being grouped as "all others":

Nationality.	Percentage of total traffic in fiscal year.							
	No. of ships.		Panama Canal net tonnage.		Tolls.		Tons of cargo.	
	1930.	1931.	1930.	1931.	1930.	1931.	1930.	1931.
United States.....	47.0	43.7	48.5	45.3	49.0	46.4	48.3	47.1
British.....	25.0	25.1	26.7	27.0	26.6	26.7	25.2	23.8
Norwegian.....	6.0	6.5	5.5	6.3	5.2	5.7	6.0	6.9
German.....	6.1	6.6	4.8	5.1	4.6	4.9	4.6	5.0
Japanese.....	2.6	3.5	2.7	3.7	3.1	4.3	3.4	4.4
Danish.....	1.5	2.2	1.3	2.2	1.3	2.1	1.7	2.4
French.....	2.0	2.0	2.1	2.2	2.1	2.1	1.9	2.0
Dutch.....	2.3	2.2	2.2	2.1	2.1	1.9	2.1	1.9
Swedish.....	2.0	2.0	1.9	1.9	1.7	1.7	2.8	2.9
All others.....	5.5	6.2	4.3	4.2	4.3	4.2	4.0	3.6
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Foreign naval vessels, other than transports, colliers, hospital ships, and supply ships, pay tolls at the rate of \$0.50 per displacement ton. Included in above tabulations of transits and tolls, but not of tonnages are the following foreign naval vessels, and a training ship of the State of New York, transiting the Canal during the fiscal year 1931, and paying tolls on the basis of displacement:

	No. of ships.	Displacement tonnage.	Tolls.
British.....	7	100,394	\$50,197.00
Chilean.....	1	28,000	14,000.00
Spanish.....	1	3,297	1,648.50
United States.....	1	1,055	529.00
Total.....	10	132,749	66,374.50

Vessels of United States and British registry contributed the larger portion of the transits through the Canal in 1931. In comparison with 1930, United States traffic was 468 transits (16.2 per cent) lower while British traffic fell of 146 transits (9.5 per cent). Danish and Japanese traffic made increases of 29 transits (31.9 per cent) and 30 transits (18.4 per cent), respectively, while the 5 others of the 9 leading nationalities decreased in number of transits.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 11, 1931.

No. 910.

1. *Panama Bay, Pacific approaches to Panama Canal, sunken sand barge, buoy marking wreck established.* (Supplement to Notice No. 909.)

A gas buoy, showing a fixed red light and painted red and black horizontal stripes was established July 10, 1931, marking the wreck of a sunken sand barge. This barge lies in 18 feet of water at mean low water in a north and south direction.

The buoy is located 50 feet southeast by south of the wreck, which is 1,250 yards north of Tortolita Island.

2. *Panama Bay, Pacific approaches to Panama Canal, wreck buoy discontinued.*

The gas buoy marking the wreck of the steamer *Los Santos*, located on the north side of Flamenco Island, was discontinued on July 10, 1931. A line drawn through the center of San Jose Rock and right tangent of Perico Island passes directly over the wreck.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 16, 1931.

No. 911.

Colombia, Cortagena Harbor, light buoy replaced on station. The following is quoted from Notice to Mariners No. 26, dated Washington, D. C., June 27, 1931:

The master of the American steamship *El Salvador* reports that the light buoy showing a flashing white light on the southwestern side of the channel northward of Castillo Grande Point has been replaced on its station.

Approximate position, 10° 24' N., 75° 32' W.

H. BURGESS,
Governor.

CANAL WORK IN JUNE, 1931.

The following is the report of the Governor to the Secretary of War, of Canal work in the month of June, 1931.

BALBOA HEIGHTS, C. Z., July 14, 1931.

*The Honorable, the Secretary of War,
Washington, D. C.*

SIR: I have the honor to submit the following report of The Panama Canal for the month of June, 1931, which closed the fiscal year ended June 30, 1931:

CANAL TRAFFIC FOR FISCAL YEAR.

The fiscal year 1931 was the seventeenth fiscal year of Canal operation. The number of vessels transiting the Canal, and the revenues collected in tolls for the year are as follows:

	Number of transits.	Tolls collected.
Commercial vessels.....	5,529	\$24,645,456.57
Launches.....	113	652.32
Noncommercial vessels:		
United States Government.....	544	
Panamanian Government.....	7	
Transiting for repairs.....	17	
Total.....	6,210	24,646,108.89

If the 568 noncommercial vessels that transited the Canal during the year had paid tolls at commercial rates, the revenue would have been increased approximately as follows:

United States Government vessels.....	\$1,157,853.20
All other.....	23,251.29
Total.....	1,181,104.49

The 5,529 commercial vessels carried 25,082,800 long tons of cargo, and the 568 noncommercial vessels carried 131,775 long tons, making the total cargo through the Canal for the year 25,214,575 long tons, or an average of 2,101,215 tons per month.

The commercial traffic during the fiscal year 1931, in addition to showing a marked reduction in comparison with the previous fiscal year, is the lowest fiscal year's traffic since 1927 with respect to the number of transits, ship tonnage, and tolls collected, and in point of cargo tonnage the lowest fiscal year since 1925. The past year's traffic in comparison with the previous low year for each feature is presented in the following tabulation:

	Fiscal year 1931.	Previous low fiscal year.	Fiscal year.
Number of transits.....	5,529	5,475	1927
Panama Canal net tonnage.....	27,792,146	26,227,815	1927
Tolls.....	\$24,645,456.57	\$24,228,830.11	1927
Tons of cargo.....	25,082,800	23,958,836	1925

In comparison with the fiscal year 1930, commercial traffic for 1931 registered a decrease of 656 transits, or 10.6 per cent; 2,188,468 tons, or 7.3 per cent, in net tonnage (Panama Canal measurement); \$2,431,433.44, or 9.0 per cent, in tolls collected; and 4,947,432, or 16.5 per cent, in cargo tonnage.

The following tabulation gives a comparison of the traffic for the fiscal year 1931 with that in the two fiscal years immediately preceding:

	Fiscal year, 1929.	Fiscal year, 1930.	Fiscal year, 1931.
Number of transits.....	6,413	6,185	5,529
Panama Canal net tonnage.....	29,837,794	29,980,614	27,792,146
United States net tonnage.....	22,793,847	22,683,006	20,595,189
Registered gross tonnage.....	37,464,792	37,430,657	34,232,824
Registered net tonnage.....	22,900,317	22,797,619	20,768,461
Tolls.....	\$27,127,376.91	\$27,076,890.01	\$24,645,456.57
Tons of cargo.....	30,663,006	30,030,232	25,082,800

COMMERCIAL TRAFFIC.

The following tabulation shows the number of vessels, Panama Canal net tonnage, tons of cargo carried, and tolls collected from vessels transiting the Canal by months for the fiscal year 1931, as compared with the previous fiscal year:

Month.	No. of vessels.		Panama Canal net tonnage.		Tons of cargo.		Tolls.	
	1929-30	1930-1	1929-30.	1930-1.	1929-30.	1930-1.	1929-30.	1930-1.
July.....	527	488	2,468,280	2,438,895	2,598,162	2,402,047	\$2,259,582.37	\$2,180,511.82
August....	541	465	2,558,739	2,345,573	2,680,730	2,148,469	2,327,437.86	2,080,230.42
September..	523	458	2,425,261	2,314,424	2,432,783	2,059,582	2,201,789.40	2,057,103.58
October....	504	517	2,747,949	2,584,160	2,845,643	2,394,410	2,485,897.71	2,288,932.08
November...	525	479	2,498,906	2,371,487	2,534,631	2,263,200	2,244,895.94	2,098,357.36
December...	522	495	2,548,771	2,473,626	2,524,934	2,166,884	2,309,030.88	2,192,583.85
January....	531	476	2,601,628	2,380,871	2,611,632	2,106,937	2,360,211.24	2,108,140.42
February...	491	431	2,369,255	2,134,866	2,377,900	1,930,219	2,131,386.12	1,915,902.78
March.....	515	439	2,505,859	2,211,934	2,558,238	1,915,507	2,260,002.36	1,964,434.22
April.....	489	453	2,479,096	2,292,805	2,456,782	2,011,117	2,232,763.00	2,014,349.13
May.....	479	428	2,418,633	2,184,959	2,261,616	1,925,452	2,162,898.60	1,923,452.18
June.....	478	400	2,358,237	2,058,546	2,147,181	1,758,976	2,100,994.53	1,821,408.73
Total..	6,185	5,529	20,980,614	27,792,146	30,030,232	25,082,800	27,076,890.01	24,645,456.57

* Commercial traffic includes all ocean-going vessels paying tolls. Vessels in direct service of the United States, Panamanian, and Colombian Governments, including merchant vessels chartered by these governments, and vessels transiting solely for repairs, do not pay tolls. Statistics on vessels not paying tolls are shown under "Noncommercial traffic."

CANAL TRAFFIC FOR JUNE, 1931.

TRANSITS AND TOLLS.

During the month of June, 400 commercial vessels and 5 small nonseagoing launches measuring under 20 tons transited the Canal. In addition to these there were 26 vessels belonging to the United States Government and 1 transit of a vessel solely for repairs, making a total of 432 transits for the month, or a daily average of 14.40.

Tolls on the 400 commercial vessels amounted to \$1,821,408.73, and on the launches to \$27.75, a total of \$1,821,436.48, or a daily average on all traffic of \$60,714.55. In comparison with the previous month, traffic for June, 1931, was lower by 28 transits and \$102,043.45 in tolls, or 6.5 per cent and 5.3 per cent, respectively. In comparison with June, 1930, there was a decrease of 78 transits and \$279,585.80 in tolls, or 16.3 per cent and 13.3 per cent, respectively. In addition to contributing the lowest traffic in the fiscal year, the past month's traffic was the lowest since September, 1925, when 388 vessels, paying \$1,692,723.11, were passed through.

The total numbers of craft of all kinds transiting the Canal during the month of June in the two preceding years and in 1931, are shown in the following tabulation:

	June, 1929.	June, 1930.	June, 1931.
Commercial vessels.....	503	478	400
Launches (under 20 tons).....	10	14	5
Noncommercial vessels:			
United States Government.....	30	73	26
Panamanian Government.....	2	2	
Vessels for repairs.....	2		1
Total.....	547	567	432

In addition to the vessels listed above, Panama Canal equipment consisting of dredges, tugs, barges, etc., was passed through the locks as follows:

	North-bound.	South-bound.	Total.
Gatun.....	5	11	16
Pedro Miguel.....	11	20	31
Miraflores.....	11	19	30
Total.....	27	50	77

The following is a summary of the commercial traffic for June in the years 1929, 1930, and 1931, and comparison with the monthly averages for the fiscal year 1931:

	June, 1929.	June, 1930.	June, 1931.	Average per month for fiscal year 1931.
Number of vessels.....	503	478	400	461
Panama Canal net tonnage.....	2,352,421	2,358,237	2,058,546	2,316,012
United States net tonnage.....	1,787,779	1,784,970	1,515,047	1,716,266
Registered gross tonnage.....	2,946,181	2,971,112	2,525,377	2,852,735
Registered net tonnage.....	1,797,003	1,805,218	1,528,993	1,730,705
Tolls.....	\$2,127,805.97	\$2,100,994.53	\$1,821,408.73	\$2,053,788.04
Tons of cargo carried.....	2,424,002	2,147,181	1,758,976	2,090,233

The average daily number of transits, net tonnage (Panama Canal measurement), tolls, and cargo, are shown in the following statement, in comparative form, commercial vessels only:

	Average per day.			Average per day for fiscal year 1931.
	June, 1929.	June, 1930.	June, 1931.	
Number of transits.....	16.76	15.93	13.13	15.15
Panama Canal net tonnage.....	78,414	78,608	68,618	76,143
Tolls.....	\$70,926.87	\$70,033.15	\$60,713.62	\$67,521.80
Tons of cargo carried.....	80,800	71,573	58,633	68,720

AVERAGE TONNAGE, TOLLS, AND TONS OF CARGO PER VESSEL.

The average tonnage, tolls, and tons of cargo per vessel transiting the Canal during the month of June in 1929, 1930, and 1931, are shown in the following tabulation:

	Average per vessel.		
	June, 1929.	June, 1930.	June, 1931.
Panama Canal net tonnage.....	4,677	4,934	4,146
United States net tonnage.....	3,554	3,734	3,798
Registered gross tonnage.....	5,857	6,216	6,313
Registered net tonnage.....	3,572	3,777	3,822
Tolls.....	\$4,230.23	\$4,395.39	\$4,553.52
Tons of cargo (including vessels in ballast).....	4,819	4,492	4,398
Tons of cargo (laden vessels only).....	5,598	5,506	5,189

NATIONALITY OF VESSELS.

Sixteen (16) nationalities were represented in the commercial traffic through the Canal in June, 1931. Vessels of United States registry, with 174, led in the number of transits, while those flying the British flag, with 102, were second. Vessels of these two nationalities made up 69 per cent of the total transits for the month. Vessels of German and Norwegian registry were next, with 28 and 20, respectively.

CARGO AND PRINCIPAL COMMODITIES.

The total cargo through the Canal during the month of June, 1931, with 1,758,976 tons, was the lowest cargo tonnage through the Canal since February, 1923, when 1,563,278 tons were passed through. In comparison with June, 1930, there was a decrease of 388,205 tons, or 18.1 per cent. Tonnage from the Atlantic to the Pacific aggregated 472,778 tons, as compared with 519,844 tons for the previous month, and 699,652 tons for June, 1930. From the Pacific to the Atlantic there were 1,286,198 tons, as compared with 1,405,608 tons for the previous month and 1,447,529 tons for June, 1930.

From the Atlantic to the Pacific various manufactured goods, totaling 157,359 tons, constituted the heaviest item of cargo, followed by mineral oils with 32,254 tons, phosphates with 22,631 tons, sulphur with 17,778 tons, tobacco with 16,858 tons, paper with 16,225 tons, and cement with 15,247 tons. There was a decrease of 226,874 tons, or 32.4 per cent, in cargo moving in this direction in comparison with June, 1930.

From the Pacific to the Atlantic mineral oils formed the leading commodity, totaling in June, 1931, 263,093 tons. This was followed by lumber with 220,287 tons; wheat with 195,947 tons; ores with 78,573 tons; sugar with 76,784 tons; miscellaneous canned goods with 56,939 tons; and nitrates with 47,591 tons. Wheat shipments increased 81,059 tons, or 70.5 per cent; canned goods, 23,611 tons, or 70.8 per cent; and nitrates, 2,744 tons, or 6.1 per cent. The other items listed above decreased as follows in comparison with June, 1930: Mineral oils, 162,617 tons, or 38.2 per cent; lumber, 29,948 tons, or 12.0 per cent; ores, 129,867 tons, or 62.3 per cent; and sugar, 968 tons, or 1.2 per cent. In aggregate there was a decrease of 161,331 tons, or 11.2 per cent, in cargo routed in this direction.

TOLLS.

At present tolls are collected at rates of \$1.20 per net ton for laden vessels and \$0.72 per ton for vessels in ballast, computed on the basis of the Panama Canal rules of measurement, with the provision that tolls shall not exceed \$1.25 per net ton, nor be less than \$0.75 per ton as determined in accordance with the United States rules of measurement of net registered tonnage. In order to ascertain the proper tolls charges it is necessary, therefore, that the net tonnage of vessels transiting the Canal be determined in accordance with both the Panama Canal and the United States rules of measurement.

Due to this limiting proviso, the tolls actually collected last month on laden vessels averaged \$0.912 per net ton, Panama Canal measurement, and tolls on vessels in ballast averaged \$0.718 per net ton, Panama Canal measurement.

Taking the traffic through the Canal for the month of June, 1931, the following tabulation shows a comparison of tolls actually collected under the present method of assessing tolls with the tolls that would have been collected on the basis of the Panama Canal rules of measurement at the proposed rates of \$1 laden and \$0.60 ballast with no added charges for deck loads. The traffic for the month is segregated by flags:

Nationality.	Tolls actually collected under present dual system.	Tolls that would have been collected under proposed rates of \$1 laden and 60c ballast on basis of Panama Canal net tonnage.	Difference.	
			Increase.	Decrease.
Belgian.....	\$12,032.85	\$11,175.00		\$857.85
British.....	478,906.29	515,157.80	\$36,251.51	
Chilean.....	8,703.75	9,470.60	766.85	
Colombian.....	1,387.00	1,176.00		211.00
Danish.....	54,516.54	54,513.60		2.94
Danzig.....	14,756.28	13,158.40		1,597.88
Dutch.....	32,491.93	38,720.40	6,228.47	
French.....	30,101.25	36,431.00	6,329.75	
German.....	97,435.15	114,001.00	16,565.85	
Italian.....	29,757.50	36,633.00	6,875.50	
Japanese.....	73,734.62	71,560.60		2,174.02
Norwegian.....	82,033.80	98,727.00	16,693.20	
Panamanian.....	56.40	44.00		12.40
Swedish.....	30,830.24	34,430.00	3,599.76	
United States.....	867,502.57	901,936.40	34,433.83	
Yugoslav.....	7,162.56	5,968.80		1,193.76
Total.....	1,821,408.73	1,943,103.60	127,744.72	6,049.85
Net increase on all traffic.....			121,694.87	

The increase on vessels of United States registry would have been distributed with respect to channels of trade in which the vessels were engaged as follows:

United States intercoastal trade.....	\$24,509.95
United States foreign trade.....	11,067.62
United States—Canal Zone trade.....	1,143.74
Total.....	34,433.83

* Denotes decrease.

RATIO OF CARGO TONNAGE TO NET TONNAGE.

The ratio of cargo tonnage to net tonnage, Panama Canal measurement, of vessels transiting the Panama Canal in June, 1931, is shown in the following tabulation, segregated by nationality of vessels and direction of transit. Laden vessels only are included:

Nationality.	Atlantic to Pacific.	Pacific to Atlantic.	Total.
Belgian.....	1.74		1.74
British.....	.55	1.27	.98
Chilean.....	.24	.25	.49
Colombian.....	.83	1.68	1.26
Danish.....	.83	1.57	1.39
Danzig.....		1.92	1.92
Dutch.....	.36	1.43	.86
French.....	.38	1.33	.91
German.....	.37	1.28	.81
Italian.....	.15	.63	.35
Japanese.....	.80	1.14	.91
Norwegian.....	.92	1.53	1.26
Panamanian.....	2.09	1.82	1.95
Swedish.....	.71	2.36	1.68
United States.....	.61	1.34	.99
Averages, June, 1931.....	.59	1.34	.99
Averages, June, 1930.....	.79	1.37	1.11
Averages, June, 1929.....	.94	1.44	1.20

CLASSIFICATION OF VESSELS.

A further classification of vessels passing through the Canal during the month of June is as follows:

Class.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of ships.	Panama Canal net tonnage.	Tolls.	No. of ships.	Panama Canal net tonnage.	Tolls.
Tank ships:						
Laden.....	1	6,783	\$5,985.00	25	140,703	\$147,586.25
Ballast.....	22	130,531	93,982.32	1	4,546	3,273.12
General cargo ships:						
Laden.....	151	804,356	716,520.75	161	818,043	743,907.90
Ballast.....	32	148,152	106,216.59	1	3,370	2,426.40
Noncargo-carrying ships:						
Dredge.....	1	1,240	924.48			
Launch.....				1	60	43.20
Tugs.....	2	156	80.00			
Yachts.....	1	55	66.00	1	551	396.72
Total.....	210	1,091,273	923,775.14	190	967,273	897,633.59
Method of propulsion:						
Steam.....	140	717,975	627,911.57	141	711,644	670,852.99
Motor.....	68	373,134	295,742.31	49	255,629	226,780.60
Motor schooner.....	1	58	41.76			
Nonpropelled.....	1	106	79.50			
Total.....	210	1,091,273	923,775.14	190	967,273	897,633.59

Of the 281 steam-driven vessels, 209 were oil burning, 67 coal burning, and 5 burned either oil or coal.

NONCOMMERCIAL TRAFFIC.

The following statement shows the number of transits and tonnage of vessels transiting the Canal free of tolls during the month of June, 1931. If tolls had been assessed against these vessels at commercial rates, the amounts would have been approximately as indicated:

Class and nationality.	Atlantic to Pacific.			Pacific to Atlantic.		
	No. of transits.	Tonnage.	Tolls.	No. of transits.	Tonnage.	Tolls.
U. S. Naval vessels:						
Cargo ships.....	1	3,434	\$4,292.50			
Gunboats.....				1	1,425	\$712.50
Submarines.....	4	3,490	1,745.00	7	6,162	3,081.00
Tankers.....	1	5,102	3,673.44	2	11,118	13,897.50
Tugs.....	1	1,000	500.00	1	1,000	500.00
U. S. Army vessels:						
Launches.....	1	10	7.50			
Transports.....	3	11,724	14,655.00	2	7,816	9,770.00
Tugs.....	1	92	69.00	1	92	115.00
Total, U. S. Government.....	12		24,942.44	14		28,076.00
Vessels for repairs:						
Tankers.....	1	1,646	1,234.50			
Grand total.....	13		26,176.94	14		28,076.00

* Indicates displacement tonnage. * Indicates Panama Canal net tonnage. * Indicates United States net tonnage.

The foregoing noncommercial vessels transiting the Canal during the month of June, 1931, carried cargo as follows: Atlantic to Pacific, 4,937 tons; Pacific to Atlantic, 18,376 tons; total, 23,313 tons.

LAUNCHES UNDER 20 TONS MEASUREMENT.

The following statement shows the number of launches under 20 tons measurement (Panama Canal net), transiting the Canal during the month of June, 1931. These launches, although paying tolls, are excepted from statements concerning commercial traffic.

	Number of transits.	Panama Canal net tonnage.	Tolls.
Atlantic to Pacific.....	3	12	\$12.60
Pacific to Atlantic.....	2	13	15.15
Total.....	5	25	27.75

STATEMENT OF TERMINAL OPERATIONS.

Details of the business transacted at the Atlantic and Pacific terminals of the Panama Canal during the month of June, 1931, are shown in the following tabulation:

	Cristobal.	Balboa.	Total.
Local cargo arriving..... tons	68,690	37,499	106,189
Local cargo shipped..... tons	7,031	1,461	8,492
Transit cargo arriving..... tons	1,761,326	1,776,866	3,538,192
Transit cargo clearing..... tons	1,775,075	1,770,837	3,545,912
Cargo received for transshipment..... tons	24,666	523	25,189
Cargo transshipped..... tons	24,144	254	24,398
"Canal Zone for Orders" cargo:			
Number of receipts issued.....	133	44	177
Number of releases issued.....	720	165	885
Tons received..... tons	1,573	283	1,856
Tons withdrawn..... tons	1,520	220	1,740
Packages received.....	8,836	1,994	10,830
Packages withdrawn.....	7,359	1,205	8,564
Vessels supplied with bunker coal:			
Commercial, other than Panama Railroad Company.....	24		24
Coal supplied to above vessels:			
Commercial, other than Panama Railroad Company..... tons	8,281		8,281
Coal issued, miscellaneous:			
Panama Canal departments..... tons	60	6	66
U. S. Army, including vessels..... tons	258		258
Individuals and companies, including galley coal for ships..... tons	77	6	83
Transferred to Navy..... tons	6		6
Total sales and issues..... tons	8,682	6	8,688
Coal on hand, June 1, 1931..... tons	49,637		49,637
Coal on hand, July 1, 1931..... tons	62,297		62,297
Coal received during month..... tons	21,342		21,342
Coal received from Navy..... tons		6	6
Fuel oil issued from Panama Canal tanks:			
Panama Canal departments..... bbls.	3,148.14	14,502.16	17,650.30
Panama Railroad Company..... bbls.	965.15	528.05	1,493.20
U. S. Army and Navy..... bbls.		171.99	171.99
Individuals and companies..... bbls.		117.62	117.62
Total sales and issues..... bbls.	4,113.29	15,319.82	19,433.11
Fuel oil on hand July 1, 1931..... bbls.	46,847.52	62,676.32	109,523.84
Diesel oil sold during June, 1931..... bbls.	220.04	2,002.90	2,222.94
Diesel oil on hand July 1, 1931..... bbls.	1,083.35	26,132.28	27,215.63
Miscellaneous transfers..... bbls.	448.36	854.70	1,303.06
Gasoline and kerosene pumped for The Panama Canal..... bbls.	2,493.00	5,085.70	7,578.70
Gasoline pumped for individuals and companies..... bbls.	992.76	6,493.93	7,486.69
Oil pumped for individuals and companies:			
Receipts..... bbls.	132,419.31	225,709.35	358,128.66
Issues..... bbls.	209,208.91	157,628.35	366,837.26
Oil pumped for U. S. Navy..... bbls.	42,294.00	7,121.00	49,415.00
Total fuel oil, gasoline, and kerosene handled..... bbls.	392,189.67	420,215.75	812,405.42
Admeasurement of vessels:			
U. S. equivalent certificates issued.....	13		13
Measured for Panama Canal net tonnage.....	3		3
Remeasured for Panama Canal net tonnage.....	13		13
Panama Canal net tonnage corrected.....	1	6	7
U. S. equivalent tonnage corrected.....	7	11	18
Services of harbor equipment:			
Tugs, total operating hours.....	289½	120	409½
Launches, total operating hours.....	1,107½	1,125	2,232½
Revenue from tug service, pilotage, etc.:			
Tug revenue.....	\$9,921.25	\$4,147.50	\$14,068.75
Pilotage.....	16,457.00	6,130.00	22,587.00
Seamen.....	9,736.00	8,848.00	18,584.00
Launch service.....	1,840.00	1,978.00	3,818.00
Wharfage.....	12,561.33	4,450.64	17,011.97
Ships measured.....	100.00		100.00
Miscellaneous.....	202.80	426.10	628.90
Ships repaired at Panama Canal shops:			
Commercial.....	37	5	42
U. S. Army and Navy.....	7	12	19
Panama Canal equipment.....	4	6	10
Total.....	48	23	71

	Cristobal.	Balboa.	Total.
Vessels dry docked:			
Commercial.....	1		1
U. S. Army and Navy.....	3	1	4
Panama Canal equipment.....		2	2
Total.....	4	3	7
Clearances issued.....	233	216	449
Bills of health issued.....	241	220	461

ALL VESSELS ENTERING AND CLEARING PORT.

	Port of Cristobal.			Port of Balboa.		
	No. of ships.	Registered gross tonnage.	Registered net tonnage.	No. of ships.	Registered gross tonnage.	Registered net tonnage.
<i>Ships entering.</i>						
All vessels, including those transiting Canal..	453	2,888,412	1,742,484	419	2,643,303	1,599,186
Vessels entering port but not transiting Canal..	59	307,021	180,421	7	37,629	25,076
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	120	785,290	470,749	92	637,016	378,343
<i>Ships clearing.</i>						
All vessels, including those transiting Canal..	454	2,897,593	1,747,512	421	2,641,558	1,601,639
Vessels clearing port but not transiting Canal..	57	307,481	180,000	7	37,629	25,076
Vessels transiting Canal and handling passengers and cargo at terminal ports.....	122	786,402	471,547	91	635,038	376,388

MOVEMENT OF PASSENGERS.

	At Cristobal.			At Balboa.		
	First-class	Others.	Total.	First-class	Others.	Total.
Disembarking:						
From Atlantic ports.....	1,095	890	1,985	176	471	647
From Pacific ports.....	158	138	296	239	229	468
Total disembarking.....	1,253	1,028	2,281	415	700	1,115
Embarking:						
For Atlantic ports.....	1,337	817	2,154	174	430	604
For Pacific ports.....	176	242	418	258	253	511
Total embarking.....	1,513	1,059	2,572	432	683	1,115
Remaining on board:						
From Atlantic to Pacific ports.....	1,344	2,372	3,716	1,447	1,924	3,371
From Pacific to Atlantic ports.....	1,109	1,762	2,871	1,130	1,919	3,049
From Atlantic to Atlantic ports.....	489	77	566			
From Pacific to Pacific ports.....				14	73	87
Total remaining on board.....	2,942	4,211	7,153	2,591	3,916	6,507
Total arriving.....	4,195	5,239	9,434	3,006	4,616	7,622
Total departing.....	4,455	5,270	9,725	3,023	4,599	7,622

PASSENGER-CARRYING VESSELS THROUGH CANAL.

	Total commercial vessels.	Pasenger-carrying vessels.	Per cent of total transits.
Atlantic to Pacific.....	210	53	25.2
Pacific to Atlantic.....	190	57	28.9
Total.....	400	110	27.5

In addition to the aforesaid, 46 passenger-carrying vessels called at the port of Cristobal and 3 at Balboa without transiting the Canal, making a total of 159 passenger-carrying vessels calling at Canal ports during the month.

AIRCRAFT ENTERING AND CLEARING.

During the month of June, 1931, 32 commercial airplanes entered and cleared at Cristobal, and 1 at Balboa.

COMMISSARY SALES TO VESSELS.

The following is a statement of commissary sales to vessels during the month of June, 1931, together with the total sales in the corresponding months in 1930 and 1929.

	Ice.	Groceries.	Cold storage.	Laundry.	Miscellaneous.	Total.
Sales at Cristobal to:						
Commercial vessels	\$1,384.55	\$8,366.41	\$14,570.12	\$196.42	\$5,290.48	\$29,807.98
Government vessels	75.60	540.45	3,896.71	4.17	758.69	5,275.62
P. R. R. vessels	2.40	350.67	171.68	743.40	27.72	1,295.87
Total sales, June, 1931	1,462.55	9,257.53	18,638.51	943.99	6,076.89	36,379.47
Total sales, June, 1930	2,512.08	13,275.90	34,074.36	861.21	9,703.95	60,427.50
Total sales, June, 1929	2,521.65	11,150.19	37,449.22	1,040.04	5,316.35	57,477.45
Sales at Balboa to:						
Commercial vessels	400.30	3,074.74	6,338.33	436.16	3,483.80	13,733.33
Government vessels	265.80	1,878.07	10,031.80	466.79	987.70	13,630.16
P. R. R. vessels			10.80	39.50		50.30
Total sales, June, 1931	666.10	4,952.81	16,380.93	942.45	4,471.50	27,413.79
Total sales, June, 1930	1,653.62	4,351.26	42,430.10	1,059.32	26,532.53	76,026.83
Total sales, June, 1929	1,067.48	11,022.62	23,328.69	924.96	3,620.98	39,964.73

The aggregate sales to Government vessels during the month was \$18,905.78; to Panama Railroad vessels, \$1,346.17; and to other commercial vessels, \$43,541.31; making the total sales to all vessels, \$63,793.26. The figures are subject to minor change on final audit.

LOCK OPERATIONS.

The following tabulation shows the number of lockages, and the number of vessels passing through the locks during the month of June, 1931, as compared with the corresponding month in 1930 and 1929:

Locks.	Number of lockages.						Comparative grand totals.		
	Commercial.			Noncommercial. †					
	North.	South.	Total.	North.	South.	Total.	June, 1929.	June, 1930.	June, 1931.
Gatun.....	183	200	383	10	8	18	496	499	401
Pedro Miguel.....	187	204	391	14	17	31	523	523	422
Miraflores.....	188	200	388	14	15	29	520	519	417
Number of vessels put through locks.									
Gatun.....	189	209	398	21	29	50	572	590	448
Pedro Miguel.....	190	209	399	29	35	64	640	598	463
Miraflores.....	190	209	399	29	34	63	631	602	462

† Includes tolls-paying craft under 20 tons.

CLASSIFICATION OF NONCOMMERCIAL VESSELS.

	Gatun.	Pedro Miguel.	Miraflores.
Army and Navy vessels	28	29	29
Panama Canal equipment	16	31	30
Launches (under 20 tons)	5	3	3
Vessels for repairs	1	1	1

The total consumption of water for lockages, maintenance, and loss in leakage was as follows in June, 1931, as compared with the preceding month and the corresponding month in 1930:

	Gatun.	Pedro Miguel.	Miraflores.
	<i>Cubic feet.</i>	<i>Cubic feet.</i>	<i>Cubic feet.</i>
Lockages	1,613,020,000	1,262,000,000	1,261,000,000
Maintenance	10,160,000		
Leakage	30,000,000	30,000,000	20,000,000
Total, June, 1931	1,653,180,000	1,292,000,000	1,281,000,000
Total, May, 1931	1,669,620,000	1,255,410,000	1,305,050,000
Total, June, 1930	1,982,360,000	1,567,860,000	1,552,580,000

HYDROGRAPHY.

The hydrographic conditions in the Canal Zone and vicinity during the month of June, 1931, are shown in comparative form, in the following tabulation:

	June,		June—Years of record.		
	1930.	1931.	Maximum.	Minimum.	Mean.
Discharge of Chagres River at Alhajuela	<i>C. f. s.</i> 2,015	<i>C. f. s.</i> 2,229	<i>C. f. s.</i> 4,870	<i>C. f. s.</i> 1,363	<i>C. f. s.</i> 2,512
Maximum momentary discharge for the month	7,398	11,510	63,900		
Gatun Lake watershed, total yield	3,961	6,330	10,391	3,961	6,429
Gatun Lake watershed, net yield	3,294	5,731	9,863	3,294	5,856
Drift on Gatun Lake for lockages and power	2,871	2,713	2,947	1,138	2,250

* June 14, 1909.

* 1914 excluded.

The monthly mean discharge of the Chagres River at Alhajuela for June, 1931, was 2,229 c. f. s., which is 12 per cent below the 30-year average of 2,512 c. f. s. The maximum monthly mean discharge on record for June is 4,870 c. f. s. in 1909, and the minimum 1,363 c. f. s. in 1906. The maximum momentary discharge for the month was 11,510 c. f. s. at elevation 98.32 feet on the 10th and 11th, and the minimum was 870 c. f. s. at elevation 92.19 feet on the 8th. The maximum momentary discharge on record for June is 63,900 c. f. s. at elevation 109 feet on June 14, 1909, and the minimum is 504 c. f. s. at elevation 90.79 feet on June 1, 1920.

Gatun Lake varied in elevation during June from a minimum of 83.17 feet on the 9th and 10th to a maximum of 84.84 feet on the 30th. The total yield of the Gatun Lake watershed was 6,330 c. f. s., which is 2 per cent below the 18-year average of 6,429 c. f. s. The maximum total yield on record for June is 10,391 c. f. s. in 1927, and the minimum is 3,961 in 1930.

Miraflores Lake varied in elevation from a maximum of 54.40 feet on the 16th to a minimum of 53.15 feet on the 26th. The monthly mean elevation was 53.76 feet, and at midnight on the 30th the lake stood at elevation 53.68 feet.

SEISMOLOGY.

Four seismic disturbances were recorded during the month—on the 8th, 16th, 27th, and 30th. The disturbances on the 16th and 27th were felt by residents of the Canal Zone and Republic of Panama.

ELECTRICAL DIVISION.

The gross generator output of the Gatun hydroelectric station for the month was 5,429,100 kilowatt hours, and the computed water consumption was 4,144,443,680 cubic feet. Continuous service was maintained at this station throughout the month. The Miraflores Diesel-electric station had a gross generator output of 6,300 kilowatt hours, and the fuel oil consumption was 23.39 barrels. This station was operated only for dry-dock pump operations and test purposes during the month.

In addition to the usual operating and maintenance work performed, electrical additions or repairs were made on 18 vessels during the month. There were 455 work orders issued during the month, as compared with 393 issued during the previous month.

MECHANICAL DIVISION.

During the month of June, 1931, miscellaneous repairs were made on 48 vessels at Cristobal and 23 at Balboa. Four vessels were dry docked at Cristobal and 3 at Balboa. Work on the general overhaul of the United States Navy's minesweeper *Chevink* and submarine *S-12* was continued during the month. Annual overhaul was begun on the Navy's submarine *S-13*. Work was completed or carried forward on several pieces of Canal equipment, including the construction of the ferry boats *President Roosevelt* and *Presidente Amador*.

MUNICIPAL ENGINEERING DIVISION.

In connection with the replacement of pipe lines on dock No. 8 water system, there were installed 4,455 feet of cast iron pipe, and other auxiliary work in connection therewith. On the Thatcher Highway a small amount of grading was performed, consisting of removing slides and filling washouts in shoulders. The dike line for the hydraulic fill at the west ferry slip was 80 per cent completed. Clearing was completed for change in alignment near the west ferry approach. On the Farfan Road, 4,400 cubic yards were excavated, and two 24-inch culverts were installed and headwalls completed for four 24-inch culverts.

Work on several improvement projects in the cities of Panama and Colon was carried on.

The usual work was performed on roads, streets, walks, and the sewer and water systems. The amount of water pumped during the month totaled 722,045,950 gallons.

DREDGING DIVISION.

The general movement along the waterfront of West Culebra slide continued throughout the month was an average movement of 0.8 foot toward the Canal, between stations 1771-00 and 1795-00 W., and 0.8 foot southward between stations 1772-00 and 177-00 W. The reference points on this slide showed a slight movement during the month.

Three additional observation points (8 in all) were placed on Cartagena slide and observed daily. This area, covering 5.6 acres, showed a slow settlement throughout the month. A dredge removed 62,400 cubic yards of slide material from the slide between stations 1905-00 and 1911-00 W. during the month. Small bank breaks occurred in a number of places throughout the cut during the month, owing to recent heavy rains.

There was no interference with shipping on account of slides during the month.

The total excavation during June, 1931, was 462,255 cubic yards, as follows:

	Wet excavation.		
	Earth.	Rock.	Total.
Work excavation:			
Canal Prism, Gaillard Cut:			
Project No. 5.....	11,300	45,250	56,550
Cartagena slide, maintenance.....	12,450	49,950	62,400
Maintenance.....	1,850	16,650	18,500
Canal prism, Pacific entrance:			
Project No. 1.....		31,250	31,250
Project No. 1-B.....	202,600	2,050	204,650
Maintenance.....	85,800		85,800
Plant excavation:			
Chame sand service.....	3,105		3,105
Total.....	317,105	145,150	462,255

The ferry operating at the north end of Pedro Miguel locks functioned 30 days during the month. One thousand three hundred and twenty-six (1,326) single trips were made, and 64 Panama Canal, 54 U. S. Army, and 4,223 other vehicles, a total of 4,341, were ferried across the Canal.

MADDEN DAM PROJECT.

The location of the transmission line entrance into the permanent power house was established and a straight line run between this point and tower No. 81. To the end of the month 57 of the 82 towers has been completed. Work was carried on during the month on the construction of five cottages, one bachelor building, and a mess hall, which will be part of the Government camp. Work of a miscellaneous nature such as preparation of drawings, gathering of hydraulic information, clearing and grubbing, filling of sinkhole No. 20, experimental clay grouting, surveying, etc., was continued during the month.

Full size copies of all drawings for Madden Dam specifications were received from Denver; also mimeographed copy of specifications without drawings.

SCHOOLS.

The school year for the white and colored schools terminated June 30, 1931. There were 94 graduates from the high schools, 62 at Balboa and 32 at Cristobal. Of the 105 American teachers, 6 resigned at the end of the school year, and the remaining teachers were granted 92 days leave of absence without pay.

The following brief summary shows the enrollment, average attendance, etc., in the white and colored schools of the Canal Zone for the year ended June 30, 1931, as compared with the year ended June, 1930:

	White.		Colored.		Total.	
	1930.	1931.	1930.	1931.	1930.	1931.
Net enrollment.....	2,790	3,083	4,080	4,230	6,870	7,313
Average daily attendance.....	2,393.3	2,641.0	3,562.4	3,731.4	5,955.7	6,372.4
Number of teachers.....	96	105	85	89	181	194

OCCUPANTS OF QUARTERS.

The number of persons, including men, women, and children, occupying Panama Canal quarters on June 30, 1931, was 23,835, composed of 8,017 Americans, 2,867 of whom were men, 2,481 women, and 2,669 children; 177 Europeans, 86 of whom were men, 30 women, and 61 children; and 15,641 West Indians, 4,257 of whom were men, 2,836 women, and 8,548 children. The total number of persons in quarters on June 30, 1930, was 22,615.

WORKING FORCE.

The following tabulation shows the number of gold and silver employees as of June 17, 1931, with a comparison of the working force for the preceding month and for June, 1930:

	Total employees.		As of June 17, 1931.		
	June, 1930.	May, 1931.	Gold.	Silver.	Total.
Operation and Maintenance:					
Office.....	140	106	55	49	104
Electrical.....	335	375	170	205	375
Municipal Engineering.....	762	873	89	771	860
Lock Operation.....	941	935	236	682	918
Dredging.....	1,179	1,172	194	981	1,125
Madden Project.....	669	258	26	237	263
Mechanical.....	1,388	1,380	475	908	1,383
Marine.....	799	747	196	564	760
Fortifications.....	165	105	18	86	74
Total.....	6,378	5,951	1,459	4,403	5,862
Supply Department:					
Quartermaster.....	2,203	1,746	203	1,650	1,853
Commissary.....	1,552	1,548	249	1,305	1,554
Cattle Industry—Plantations.....	100	97	2	89	91
Hotel Tivoli.....	116	112	8	103	111
Hotel Washington.....	104	99	9	92	101
Transportation.....	325	306	72	228	300
Total.....	4,400	3,903	543	3,467	4,010
Accounting Department.....	210	211	206	6	212
Health Department.....	1,155	1,109	290	822	1,112
Executive Department.....	865	883	553	333	886
Total.....	2,230	2,203	1,049	1,161	2,210
Panama Railroad Company:					
Superintendent.....	302	284	44	235	279
Transportation.....	188	179	61	116	177
Receiving and Forwarding Agency.....	1,377	1,371	78	1,074	1,152
Coaling Stations.....	249	241	42	168	210
Total.....	2,116	2,075	225	1,593	1,818
Grand total, June, 1930.....	15,124				
Grand total, May, 1931.....		14,137			
Grand total, June, 1931.....			3,276	10,624	13,900

Additions to the gold force on the Isthmus in June were as follows: Employed in the United States, 6; employed on the Isthmus, 22; reemployed on the Isthmus, 11; total, 39. Separations from the gold force totaled 21, as follows: Resigned, 16; discharged, 4; died, 1. At the end of the month there were on file 850 applications from residents of the Isthmus for employment.

VITAL STATISTICS.

A total of 194 deaths occurred during the month of June, 1931, among the population of the Canal Zone, and the cities of Panama and Colon (population, 143,636), which is equivalent to an annual death rate of 16.21 per 1,000 population. The

leading causes of death were: Tuberculosis of the respiratory system, 33; pneumonia (broncho and lobar), 30; diarrhea and enteritis, 19; organic diseases of the heart, 12; and cancer (various organs), 9. There were 5 deaths from nephritis, and 1 from leprosy. There were 24 deaths among nonresidents, which are not included in the above statistics.

There were 298 live births and 8 stillbirths reported during the month. Including stillbirths, this is equivalent to an annual birth rate of 25.56. Deaths among children under 1 year of age numbered 38, giving an infant mortality rate based on the number of live births reported, of 127.52.

The total number of malaria cases reported from the Zone and the cities of Panama and Colon was 458, of whom 70 were employees (17 white and 53 colored), 47 were members of employees' families (7 white and 40 colored), 45 were Canal Zone agriculturists, 118 were other civilian nonemployees, and 178 were Army and Navy personnel. Of the 117 employees and members of employees' families, 37 were probably infected outside our sanitated areas, as they gave history of working, living, or having been in such areas at night previous to their becoming sick.

There were 4 deaths from malaria among residents, 1 American employee, 1 colored child living on a farm near Gamboa, 1 colored child living at Gatun, who received infection while in the interior of Panama, and a colored resident of Colon, who received infection while living in Colombia.

RECEIPTS AND SALES OF MATERIAL AND SUPPLIES.

The value of material ordered on United States requisitions for which invoices were received on the Isthmus during the month totaled \$361,384.31, of which \$346,310.25 was for the Department of Operation and Maintenance, and \$15,074.06 for other Panama Canal departments.

Cash sales on the Isthmus from stock, fuel oil, scrap, and obsolete and second-hand material, amounted to \$29,874.80.

FINANCIAL STATEMENT.

The following statement shows in a condensed form the aggregate revenues and expenditures for the month of May, 1931, as compared with May, 1930, with the figures for the first 11 months of the current fiscal year as compared with the same period in the fiscal year 1930.

It is impossible to submit figures for the month of June, 1931, at the time of writing this report, since all charges, etc., involved in the accounting have not been completed.

	May, 1930.	May, 1931.	To end of May.	
			Last year.	This year.
Tolls.....	\$2,163,009.90	\$1,923,496.88	\$24,976,009.19	\$22,823,113.91
Other receipts.....	440,996.58	298,788.25	4,140,550.75	3,819,447.74
Total transit revenues.....	2,604,006.48	2,222,285.13	29,116,559.94	26,642,561.65
Total transit expenses.....	1,209,253.85	1,107,108.63	12,299,156.87	12,809,274.00
Net transit revenues.....	1,394,752.63	1,115,176.50	16,817,403.07	13,833,287.65
Three per cent capital charge...	621,966.53	626,591.52	6,835,046.44	6,887,160.47
Transit surplus.....	772,786.10	488,584.98	9,982,356.63	6,946,127.18
Business revenues.....	1,506,519.97	1,306,009.50	18,105,459.76	16,210,402.51
Business expenses.....	1,689,888.07	1,517,985.61	17,355,796.72	15,722,002.14
Net business revenues.....	(183,368.10)	(211,976.11)	749,663.04	488,400.37
Three per cent capital charge.....	64,131.07	66,112.77	731,085.50	757,745.15
Business surplus.....	(247,499.17)	(278,088.88)	18,577.54	(269,344.78)
Combined revenues.....	4,110,526.45	3,528,294.63	47,222,019.70	42,852,964.16
Combined expenses.....	2,899,141.92	2,625,094.24	29,654,953.59	28,531,276.14
Net revenues.....	1,211,384.53	903,200.39	17,567,066.11	14,321,688.02
Three per cent capital charge.....	686,097.60	692,704.29	7,566,131.94	7,644,905.62
Combined surplus.....	525,286.93	210,496.10	10,000,934.17	6,676,782.40

(-) Indicates deficit.

Respectfully,

H. BURGESS,
Governor.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT
BALBOA HEIGHTS, C. Z., July 16, 1931.

No. 912.

Central America, west coast, Guatemala, San Jose Light again normal. The following is quoted from Notice to Mariners No. 26, dated Washington, D. C., June 27, 1931:

The second officer of the British steamship *Narenta* reports that on the morning of May 6, and again on the evening of June 5, 1931, San Jose Light was observed to be showing its normal characteristic—occulcuting white every 10 seconds, light 5 seconds, eclipse 5 seconds.
Approximate position, 13° 55' 12" N., 90° 49' 40" W.

H. BURGESS,
Governor.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Cristobal, C. Z., for Week Ending July 18, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Feltre	Navigazione Libera-Triestina		July 12.		317
Balboa	Johnson S. S. Line.		July 12.		146
Magdalena	Hamburg-American Line.		July 12.		509
Theodore Roosevelt	Fred Olsen & Co.		July 12.		207
Chile	Danish-East Asiatic Line.		July 12.		13
Lochgoil	Royal Mail Steam Packet Co.	July 12.	July 13.	185	23
Buenaventura	Panama R. R. S. S. Line.		July 13.		42
Orbita	Pacific Steam Navigation Co.	July 13.	July 13.	36	6
Santa Teresa	Grace Line.	July 13.	July 13.	225	250
President Wilson	Dollar Line.	July 14.	July 14.	306	35
Camden	United Fruit Co.	July 14.	July 14.	5, 225	(⁺)
Annie Johnson	Johnson S. S. Line.	July 14.	July 14.	(⁺)	180
Schwaben	North German Lloyd	July 14.	July 14.	2	(⁺)
Zacapa	United Fruit Co.	July 14.	July 15.	178	307
Crijnsen	Royal Netherlands S. S. Co.	July 14.	July 15.	70	5
Ruhr	Hamburg-American Line.	July 15.	July 15.	36	5
Tela	United Fruit Co.	July 15.	July 15.	611	38
Kuma Maru	Nippon Yusen Kaisha	July 15.	July 15.	72	(⁺)
Moveria	Donaldson S. S. Line.	July 15.	July 16.	(⁺)	297
Pastores	United Fruit Co.	July 15.	July 16.	264	168
Bolivar	United Fruit Co.	July 16.	July 17.	14 ¹	1
Ancon	Panama R. R. S. S. Line.	July 16.	July 16.	2, 233	
Westerwald	Hamburg-American Line.	July 16.	July 17.	42	257
Daytonian	Leyland S. S. Line.	July 16.	July 18.	628	1, 117
Arkansas	French Line.	July 16.	July 18.	733	(⁺)
Caldas	National Navigation Co.		July 17.		66
Juan S. Elcano	Spanish Line.	July 17.	July 17.	244	
Cauca	National Navigation Co.	July 17.	July 17.	284	
San Francisco	Hamburg-American Line.	July 17.	July 17.	54	80
Tolosa	United Fruit Co.	July 17.	July 17.	130	45
Crijnsen	Royal Netherlands S. S. Co.	July 17.	July 18.	10	319
Atlantida	Standard Fruit and Steamship Co.	July 17.	July 18.	80	189
Hindanger	Westfal, Larsen & Co.	July 17.	July 18.	(⁺)	99
Santa Inez	Grace Line.	July 17.	July 18.	126	322
Venezuela	Panama Mail S. S. Co.	July 17.	July 17.	218	
Acajutla	Pacific Steam Navigation Co.	July 18.	July 18.	787	
Bodegraven	Royal Netherlands S. S. Co.	July 18.	July 18.	131	
Hollywood	Charles R. McCormick	July 18.	July 18.	33	(⁺)
Calif.	Roland Line.	July 18.	July 18.	850	
Durazzo	Hamburg-American Line.		July 18.		136

* No cargo discharged.

* No cargo laded.

**Report of Cargo Discharged and Laded by Vessels Entering and Clearing
from Port of Balboa, C. Z., for Week Ending July 18, 1931.**

Name of vessel.	Line or charterer.	Arrived.	Departed.	Cargo—	
				Discharged	Laded.
				Tons.	Tons.
Santa Maria	Grace Line.	July 10.	July 10.	132	5
City of Elwood	Roosevelt S. S. Co.	July 11.	July 12.	636	
Rakuyo Maru	Nippon Yusen Kaisha	July 11.	July 12.	90	
Santa Teresa	Grace Line.	July 12.	July 13.	2	1
Kenowis	U. S. Government.	July 14.	July 15.	1, 104	31
San Mateo	United Fruit Co.	July 15.	July 16.	308	22
Port Fairy	Commonwealth & Dominion Line.	July 16.	July 17.	16	
Virginia	Panama-Pacific Line.	July 17.	July 17.		176
Westerwald	Hamburg-American Line.	July 17.	July 18.	177	

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 18, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tons.	
Rayneas ²	11	16.50	12	6.10	12	13.55	12	14.50	Norwegian.	West Indian Trad. Co.	350.8	50.8	14.0	Gothenburg, Swed	Seattle, Wash.	Cement	1,054	3,633
Gertrude	12	2.55	12	7.30	12	14.31	12	15.34	American.	Kellogg S. S. Co.	391.9	51.0	17.0	New Orleans, La.	Manila, P. I.	Ballast	5,393	3,716
Chilo ²	11	23.45	12	10.58	12	17.50	12	18.18	Danish	Pagot Asiatic Co.	425.0	55.0	19.3	Copenhagen, Den.	Vancouver, B. C.	General	3,919	5,663
Princeton	12	10.45	12	11.50	12	17.25	12	18.40	British	R. Chapman & Son	436.0	60.4	18.0	N. Shields, Eng.	Vancouver, B. C.	Ballast	8,144	6,028
Absconka	12	11.05	12	11.40	12	18.46	12	19.53	American	McCombs S. S. Co.	409.6	54.1	20.0	Wilming, Del.	Tacoma, Wash.	General	4,714	4,993
Santa Maria ²	12	13.55	13	6.00	13	13.14	13	14.35	American	Union Oil Co.	460.0	60.0	19.2	Cristobal, C. Z.	Los Angeles, Calif.	Ballast	8,746	5,725
Lochgo ²	12	13.35	13	6.00	13	13.14	13	14.35	American	Royal Mail S. S. P. Co.	485.5	62.3	20.8	Rotterdam, Holl'd	Vancouver, B. C.	General	2,742.0	7,006
Harry G.	12	16.30	13	7.20	13	14.48	13	15.50	Danzig	Baltic-Am. P&T Co.	503.0	68.0	21.0	Hamburg, Germany	Talara, Peru	Ballast	11,646	7,653
Buenaventura.	11	10.10	13	11.50	13	18.25	13	19.30	American	Panama R. R. S. S. Line	551.0	43.0	17.8	New York, N. Y.	Guayaquil, Ecuador	General	501	2,873
S-14 ²	13	15.00	13	15.10	13	21.48	14	00.15	American	U. S. Navy	231.0	21.0	10.0	Cristobal, C. Z.	Balboa, C. Z.	Ballast	9,007	6,551
Western Sun ²	13	15.30	13	15.35	13	22.44	14	00.15	American	Sun Oil Co.	480.6	66.0	21.0	Maracaibo, Venz.	Los Angeles, Calif.	Ballast	5,368	5,732
Point Chico	14	3.55	14	6.20	14	14.17	14	15.25	American	Swayne & Hoyt	386.8	52.2	22.6	Houston, Tex.	Seattle, Wash.	(s)		
Lt. Col. H. C.	14	6.20	14	14.17					American	U. S. Army	98.0	22.0		Cristobal, C. Z.	Balboa, C. Z.	Towing barge.		
Yakima Star ²	14	00.05	14	12.05	14	19.28	14	22.28	German	Blue Star Line	460.0	60.0	18.6	Hamburg, Germany	Vancouver, B. C.	Ballast	7,368	6,183
Sun Manuel ²	14	22.25	15	6.15	15	13.38	15	15.40	British	Eagle Oil & Ship. Co.	407.0	53.0	25.6	Curacao, D. W. I.	Antofagasta, Chile	(s)		
Harry	15	7.15	15	7.50	15	14.49	15	16.00	American	Lukenbach Line	448.9	60.2	22.0	Boston, Mass.	Seattle, Wash.	General	3,000	9,262
Lukenbach.	15	6.40	15	13.10	15	20.40	15	22.55	French	Messageries Maritimes	351.0	52.5	23.1	Dunkirk, France	Noumea, N. Caled.	General	2,796	6,853
Esperance	15	12.25	15	12.45	15	18.50	15	20.00	American	Amer-Hawaiian Line	404.6	53.9	9.6	Boston, Mass.	Seattle, Wash.	General	3,262	6,754
Oregonian	15	14.05	15	14.25	15	21.29	15	22.55	British	R. Chapman & Son	412.6	55.0	17.6	Newcastle, Eng.	Vancouver, B. C.	Ballast	6,811	4,810
Koranton	15	15.35	16	6.10	16	12.51	16	17.05	British	Alfred Holt & Co.	452.0	58.0	23.0	Philadelphia, Pa.	Shanghai, China	General	4,791	8,640
Pacific	15	15.45	16	6.05	16	13.45	16	15.10	British	Furness, Withy & Co.	435.9	54.9	17.8	Glasgow, Scotland	Vancouver, B. C.	General	553	9,633
Exporter ²	16	6.35	16	7.15	16	14.37	16	16.00	American	Calmar Line	410.5	54.3	20.1	Baltimore, Md.	Seattle, Wash.	Steel, general	4,799	6,567
Texmar	16	8.45	16	8.50	16	15.15	16	17.45	Japanese	Osaka Shosen Kaisha	446.0	60.0	23.4	New York, N. Y.	Shanghai, China	General	3,289	8,942
Sanyo Maru ²	16	9.10	16	9.20	16	16.02	17	1.03	British	N. Z. Shipping Co.	531.0	70.0	27.0	London, England	Auckland, N. Z.	General	3,850	18,205
Rangano	16	11.20	16	11.30	16	18.30	16	20.00	Danish	Angle-Saxon Pet. Co.	456.8	59.7	18.6	Hamburg, Germany	Los Angeles, Calif.	Ballast	8,102	5,623
Jane Maersk ²	16	12.55	16	13.05	16	19.45	16	21.05	American	Williams S. S. Line	415.0	56.0	20.0	Baltimore, Md.	Seattle, Wash.	General	3,431	7,731
Willazo	15	16.30	16	14.10	16	20.30	16	21.50	British	Donsdson Line	385.0	51.6	18.5	Glasgow, Scotland	Vancouver, B. C.	General	1,329	6,576
Moveria ²	16	15.10	17	6.00	17	13.05	17	14.50	American	Dollar Line	517.0	72.0	26.10	New York, N. Y.	San Francisco, Cal.	General	1,159	15,234
Pierce	17	6.50	17	7.00	17	14.08	17	17.45	Swedish	Transatlantic S. S. Co.	448.0	58.0	19.6	Antwerp, Belgium	Seattle, Wash.	Gen., coke, sand.	4,507	8,190
Parrakoola ²	17	5.55	17	7.25	17	15.00	18	1.20	American	Panama-Pacific Line	586.4	60.3	27.8	New York, N. Y.	San Francisco, Cal.	General, paper	2,678	25,254
Virginia	17	7.20	17	7.50	17	16.41	17	17.45	American	Isthmian S. S. Lines	425.0	56.0	26.0	Mobile, Ala.	Seattle, Wash.	Steel	8,138	7,611
Knoxville City	17	10.20	17	10.30	17	17.30	17	23.00	Swedish	Stockholm Rederi	378.0	51.0	16.10	Brevik, Norway	Corral, Chile	Gen., fish hooks	2,274	5,448

² Motor ship.³ Submarine.⁴ Tug.⁵ General, pipe, and sulphur.⁶ Gasoline and benzine.

Westerwald	16	9 20	17 13	10 17	20 40	18 14	10 00	German	Hamburg-American Line	391.8	50 4	15 7	Hamburg, Germany	Champerico, Guat.	General	1,649	5,621	3,948
Caldea	4	16 50	17 13	05 17	20 35	18 1 30	Colombian	National Navigation Co.	116 0	21 0	7 6	Buenaventura, Col.	Buenaventura, Col.	General	42	211	124	
St. Michel	17	2 50	17 15	09 17	21 29	18 13	Armean	U. S. Army	437 0	58 0	23 6	Balboa, C. Z.	Balboa, C. Z.	General	230			
San Francisco	17	9 55	17 15	18 11	33 18	13 15	German	Hamburg-American Line	432 0	59 0	22 1	Vancouver, B. C.	Vancouver, B. C.	General	4,716	8,454	6,344	
Texas	17	19 50	17 20	00 18	12 36	14 00	Armean	The Texas Co.	416 8	56 1	17 0	Los Angeles, Calif.	Los Angeles, Calif.	Ballast	2,000	9,453	4,922	
Sacramento	17	20 50	18 6	55 18	13 05	14 35	Armean	Nelson Line	380 0	53 2	19 6	Seattle, Wash.	Seattle, Wash.	General	7,582	6,251	4,700	
Atlantic Maru	18	2 30	18 6	55 18	14 10	15 35	Japanese	Kokusi Kaisha	385 0	51 0	26 2	Kobe, Japan	Kobe, Japan	Cotton, rosin				
Prince	15	23 55	18 7	55 18	14 41	18 16	British	Prince Line, Ltd.	441 0	60 0	25 3	Manila, P. I.	Manila, P. I.	General	5,094	9,240	6,152	
Baron Carnegie	8	0 05	18 8	15 18	15 02	18 45	British	H. Hagarth & Sons	336 0	48 0	15 0	Arica, Chile	Arica, Chile	Ballast	3,943		2,576	
Hollywood	18	1 40	18 9	15 18	17 30	18 40	Armean	McCormick S. Co.	410 0	54 0	18 11	Los Angeles, Calif.	Los Angeles, Calif.	General	2,873	6,584	5,030	
Santa Inez	10	20 18	18 10	05 18	16 19	1 05	Armean	Grace Line	370 0	53 0	20 1	Valparaiso, Chile	Valparaiso, Chile	General	1,405	6,258	4,016	
Durazo	20	25 18	18 10	05 18	18 19	15 15	German	Hamburg-American Line	227 5	34 4	14 1	Cristobal, C. Z.	Guayaquil, Ecuador	General	136	1,633	1,041	
Texas	18	11 35	18 12	00 18	18 30	18 19	Armean	Amer-Hawaiian Line	471 0	57 2	20 0	New York, N. Y.	Seattle, Wash.	General	3,125	9,154	6,966	
Ruth Kellogg	18	12 10	18 12	35 18	20 30	18 21	Armean	Kellogg S. Corp.	300 0	54 2	14 0	Philadelphia, Pa.	Los Angeles, Calif.	Ballast				
Hindager	17	7 55	18 13	30 18	21 12	22 45	Norwegian	Wadsworth & Co.	398 0	55 0	18 8	Buenos Aires, Arg.	Vancouver, B. C.	Coffee, general				
Sacramento	18	14 05	18 14	15 18	21 55	18 22	Armean	U. S. Navy	224 0	40 0		High seas	Balboa, C. Z.	Ballast	1,603	6,854	5,287	

* Tanker.

7 Transport.

8 Gunboat.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Britta	11	20 15	12 6 38	12 14 50	12 14 50	12 14 50	Norwegian	Caucasian Oil Co.	407 8	54 7	27 0	Los Angeles, Calif.	Los Angeles, Calif.	Lands End, Eng. ¹⁰	Gasoline	8,246	6,539	4,252
Lake Oswega	12	2 45	12 6 57	12 15 15	12 15 15	12 15 15	Armean	Ford Motor Co.	251 0	54 6	22 0	Seattle, Wash.	Seattle, Wash.	New York, N. Y.	General	3,020	2,729	1,609
Portmar	12	7 25	12 8 20	12 16 10	12 16 10	12 16 10	Armean	Calmar S. S. Corp.	409 8	54 2	26 0	Seattle, Wash.	Boston, Mass.	Boston, Mass.	Lumber	7,030	5,581	4,765
Hefron	12	8 00	12 9 38	12 17 20	12 17 20	12 17 20	Armean	Weyerhaeuser Co.	440 0	56 0	27 0	Everett, Wash.	Portsmouth, R. I.	Portsmouth, R. I.	Lumber	9,855	8,319	6,067
Arizonian	12	00 09	12 10 38	12 18 00	12 18 00	12 18 00	Armean	Amer-Hawaiian Line	434 3	57 7	25 0	Seattle, Wash.	Boston, Mass.	Boston, Mass.	General	7,642	7,983	5,916
Point Gorda	12	10 45	12 11 15	12 18 45	12 18 45	12 18 45	Armean	Swayne & Hoyt	324 0	46 2	21 0	Portland, Ore.	New Orleans, La.	New Orleans, La.	Lumber, general	2,780	3,383	2,643
City of Elwood	11	6 20	12 15 19	12 22 25	12 22 25	12 22 25	Armean	Rosevelt S. S. Co.	390 2	55 0	27 0	Holilo, P. I.	New York, N. Y.	New York, N. Y.	Sugar, general	7,665	7,344	5,283
Santa Teresa	12	16 30	13 6 43	13 15 03	13 23 10	13 23 10	Armean	Grace Line	380 2	51 6	24 0	Valparaiso, Chile	New York, N. Y.	New York, N. Y.	General	3,581	5,726	4,086
Pacific Fir	12	23 55	13 6 45	13 15 03	13 16 25	13 16 25	Armean	Dimon S. S. Corp.	410 5	54 0	25 0	Seattle, Wash.	Norfolk, Va.	Norfolk, Va.	Lumber, general	7,772	6,624	4,833
Orbita	13	1 25	13 9 40	13 17 40	13 21 27	13 21 27	British	Pacific Steam Nav. Co.	550 3	67 5	30 0	Tacoma, Wash.	London, England	London, England	General	6,106	16,844	11,731
El Cirveto	13	9 50	13 10 51	13 18 55	13 21 27	13 21 27	British	Anglo-Siam Oilfields	490 4	52 2	26 0	La Libertad, Peru	Philadelphia, Pa.	Philadelphia, Pa.	Crude oil	7,940	6,046	4,326
Pennsylvania	13	9 55	14 6 10	14 14 14	14 15 55	14 15 55	Armean	Panama-Pacific Line	586 4	80 3	30 0	San Francisco, Cal.	New York, N. Y.	New York, N. Y.	General	5,018	25,262	18,194
Annie Johnson	11	7 40	14 6 40	14 15 27	14 21 10	14 21 10	Swedish	Johnson Line	392 0	52 6	26 0	San Francisco, Cal.	Stockholm, Sweden	Stockholm, Sweden	General	5,904	6,690	4,919
Schwaben	13	20 30	14 7 06	14 15 40	14 17 40	14 17 40	German	North German Lloyd	491 4	63 8	27 0	Vancouver, B. C.	Bremen, Germany	Bremen, Germany	General	9,842	10,002	6,743
Oltion	14	4 00	14 7 43	14 16 10	14 15 10	14 15 10	Armean	Amer-Hawaiian Line	407 7	53 7	27 3	Portland, Ore.	Boston, Mass.	Boston, Mass.	General	5,569	7,103	4,991
Edward	14	5 00	14 8 09	14 17 20	14 17 20	14 17 20	Armean	Lukenbach Line	436 6	57 2	27 0	Seattle, Wash.	Boston, Mass.	Boston, Mass.	General, lumber	7,839	8,543	6,427
Cardier	14	5 45	14 8 25	14 18 45	14 20 05	14 20 05	Belgian	Soc. Anonyme C.M.S.R.	490 4	60 8	25 0	New Westminster, B. C.	Antwerp, Belgium	Antwerp, Belgium	General	9,912	9,264	7,044
Wilson	14	8 50	14 9 45	14 17 25	14 22 40	14 22 40	Armean	Dollar Line	516 5	72 2	31 0	Manila, P. I.	New York, N. Y.	New York, N. Y.	General	6,285		
California	14	11 15	14 11 59	14 19 55	14 21 30	14 21 30	Armean	Standard Oil Co., Calif.	513 5	68 2	30 0	Los Angeles, Calif.	London, England	London, England	Gasoline	15,365	11,719	8,619
San Simon	14	12 30	14 13 09	14 20 30	14 20 30	14 20 30	Armean	McQuay-Norris	410 5	54 3	24 0	Portland, Ore.	Philadelphia, Pa.	Philadelphia, Pa.	Lumber, general	6,968	6,573	4,916
West Camargo	14	13 00	14 13 40	14 21 15	14 21 25	14 21 25	Armean	McCormick S. S. Co.	410 5	54 0	24 0	San Francisco, Cal.	Buenos Aires, Arg.	Buenos Aires, Arg.	Lumber, general	5,148	6,624	5,040
Kuma Maru	14	23 00	15 6 51	15 14 15	15 23 00	15 23 00	Japanese	Nippon Yusen Kaisha	405 0	53 0	28 0	Holilo, P. I.	Boston, Mass.	Boston, Mass.	General	8,150		
Ruhr	15	6 30	15 7 33	15 14 15	15 22 30	15 22 30	German	Hamburg-American Line	454 0	58 3	24 5	Magallanes, Chile	Hamburg, Germany	Hamburg, Germany	General	8,765		
Europa	15	8 15	15 9 46	15 17 25	15 25 35	15 25 35	Danish	East Asiatic Co.	465 4	62 2	28 0	Vancouver, B. C.	Copenhagen, Den.	Copenhagen, Den.	General	9,206	11,226	8,275
Kenowis	14	5 00	15 10 30	15 18 20	15 25 35	15 25 35	Armean	U. S. Army	390 0	54 2	18 3	San Francisco, Cal.	Brooklyn, N. Y.	Brooklyn, N. Y.	Army supplies			
China Arrow	15	11 55	15 12 38	15 20 35	15 20 35	15 20 35	Armean	Standard Oil Co., N. Y.	468 3	62 7	28 0	Los Angeles, Calif.	Boston, Mass.	Boston, Mass.	Gasoline	12,264	10,084	7,388

10 Motor ship.

11 For orders.

12 Lumber and automobile parts.

13 Barley, fruit, and general.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator).		Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Nature.	Tons.	Gross.	Net.
Planter	15	12 50	15	13 34	15	21 30	16	3 05	British.	Harrison Line.	420.0	54.5	24.0	N. Westminster, B. C.	London, England.	General.	7,698	6,558	4,621	
Fresno City ¹¹	15	14 05	15	14 45	15	21 45	15	21 45	British.	Reardon Smith Line.	415.6	55.5	25.0	Vlad'vok, U.S.S.R.	United Kingdom	General. ⁽¹⁹⁾	7,000	7,169	5,408	
Lancaster	15	13 45	16	6 16	16	14 15	16	14 15	American.	Argonaut S. S. Line.	431.0	57.7	26.1	Hilo, T. H.	New Orleans, La.	Sugar.	9,319	7,935	5,841	
Nabriton	16	1 00	16	6 54	16	15 10	16	15 10	British.	R. Dale & Co.	412.6	55.5	25.1	Vancouver, B. C.	London, England.	Wheat, general.	9,784	8,233	4,797	
Earlsport	16	5 45	16	7 22	16	16 10	16	16 20	British.	J. & J. Denholm.	404.8	53.0	25.0	Antofagasta, Chile.	Azores ¹⁴ .	Nitrates	7,930	5,793	4,120	
Prinus	15	19 30	16	7 52	16	17 30	16	18 55	British.	Howard Tenues, Ltd.	411.8	55.4	25.0	Tecapilla, Chile.	Azores ¹⁴ .	Nitrates	8,580	7,080	5,227	
Therton.	16	7 15	16	8 26	16	17 55	16	17 55	British.	R. Chapman & Son.	400.0	52.4	24.5	Vancouver, B. C.	London, England.	Wheat, oats, gen.	7,504	5,939	4,126	
Arkansas	16	8 00	16	9 07	16	19 10	18	10 25	French.	French Line.	468.0	53.4	27.2	Valparaiso, Chile.	Haute, France.	General.	9,800	7,822	5,985	
Incalite ¹	16	14 25	16	16 19	17	12 30	17	12 30	British.	Imperial Oil Co.	350.3	48.5	26.10	Callao, Peru	Halifax, N. S.	Crude oil.	5,800	4,447	3,183	
Calgarolite ^{11 13}	16	23 00	17	6 21	17	13 45	17	14 45	British.	Imperial Oil Co.	521.0	70.4	31.0	Talara, Peru	Montreal, Canada.	Crude oil.	16,500	13,339	7,717	
Port Fairy ¹¹	16	15 00	17	6 34	17	14 05	17	14 05	British.	Com'lth & Dom. Line.	477.3	63.2	23.5	Pt. Chalmers, N. Z.	London, England.	Frozen, general.	4,960	10,073	7,757	
Minnesota.	17	4 10	17	7 43	17	15 05	17	15 05	American.	Amer-Hawaiian Line.	407.7	53.7	24.4	Pt. Town 'd, Wash.	Boston, Mass.	General.	6,334	7,150	5,024	
Westmoreland.	17	6 30	17	8 00	17	16 10	17	16 10	British.	Federal Steam Nav. Co.	473.0	60.1	23.0	Oamaru, N. Z.	Glasgow, Scotland.	Frozen, general.	4,242	10,423	7,456	
Pacific																				
Trader ¹²	17	22 40	17	8 29	17	16 55	19	18 15	British.	Furness, Withy & Co.	420.0	58.0	25.0	Vancouver, B. C.	London, England.	General.	7,382	7,979	5,916	
Cauca ¹¹	17	10 20	17	11 04	17	18 10			Colombian.	National Navigation Co.	107.4	22.9	11.3	Buenaventura, Col.	Cristobal, C. Z.	Coffee, platinum.	283	262	161	
Ferglen ¹¹	17	11 55	17	12 29	17	19 20	17	20 45	Norwegian.	Fern Line.	385.3	54.6	26.0	Vlad'vok, U.S.S.R.	Stettin, Germany.	Soya beans.	7,625	6,615	4,859	
J. W.																				
Van Dyke ^{11 13}	17	17 35	18	5 55	18	13 55	18	13 55	American.	J. B. Berry Sons & Co.	365.0	50.9	24.3	Los Angeles, Calif.	Tiverton, R. I.	Gasoline.	6,599	5,174	3,528	
Betterton ¹¹	17	17 45	18	7 00	18	15 10	18	15 10	American.	Shell Eastern Prod. Co.	431.0	59.2	28.0	Vancouver, B. C.	Sewarren, N. J.	Gasoline.	7,793	7,863	5,104	
Sulairia.	17	19 50	18	7 19	18	17 30	18	17 30	British.	Donaldson Line.	425.0	56.0	27.0	Vancouver, B. C.	Glasgow, Scotland.	General.	7,584			
Acajula.	18	00 20	18	7 51	18	17 55			British.	Pacific Steam Nav. Co.	215.7	33.5	16.0	Champerico, Guat.	Cristobal, C. Z.	General.	787	1,273	706	
Cayana ¹¹	18	7 57	18	8 57	18	19 10	20	10 30	American.	U. S. Navy.	455.0	56.0	29.0	Los Angeles, Calif.	Cristobal, C. Z.	General. ⁽¹⁹⁾	7,425			
Oakmar.	18	13 30	18	14 13	18	22 00	18	22 00	American.	Calmar S. S. Corp.	384.4	51.2	25.0	Seattle, Wash.	New York, N. Y.	Lumber.	6,162	6,327	4,432	
Chateau																				
Thierry.	18	14 15	18	14 56	18	21 30	19	10 14	American.	U. S. Army.	448.0	58.2	24.0	Honolulu, T. H.	New York, N. Y.	Army stores.	324			
Call.	18	14 25	18	16 33	18	23 35			German.	Roland Line.	516.0	32.9	15.0	Guayaquil, Ecuador	Cristobal, C. Z.	General.	850	1,105	698	
Amerkaland ¹¹	18	16 20	18	17 14	19	14 10	19	14 40	Swedish.	Ore S. S. Corp.	261.5	72.0	34.0	Cruz Grande, Chile	New York, N. Y.	Iron ore.	21,650	15,560	4,496	
Baron Ramsay.	18	19 00	18	19 54	19	13 10	19	13 10	British.	H. Hogarth & Sons	350.0	50.2	22.0	Talal, Chile	Azores ¹⁴ .	Nitrates	5,775	4,297	3,051	

¹¹ For orders.¹² Motor ship.¹³ Tanker.¹⁴ Cedar wood and soya beans.¹⁵ Fuel oil, gasoline, and lubricating oil.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL

* ARRIVALS.			* DEPARTURES.		
Date.	Vessel.	Line.	From—	Date.	Vessel.
July 14.	Camden.	United Fruit Co.	Curacao, D. W. I.	July 12.	No. 144-M ¹⁷ .
July 14.	Zacapa.	United Fruit Co.	Cartagena, Colombia.	July 12.	No. 9670 ¹⁷ .
July 14.	Cryssen.	Royal Netherlands S. S. Co.	Amsterdam via waypoints.	July 12.	No. 668-M ¹⁷ .
July 14.	No. 144-M ¹⁷ .	Pan American-Grace Airways	Pimental via waypoints.	July 12.	Magdalena.
July 14.	Anachucuna ¹⁸ .	A. Tagaropulos.	Colon, Rep. of Panama.	July 14.	Anachucuna ¹⁸ .
July 14.	Inapaquina ¹⁸ .	A. Tagaropulos.	Colon, Rep. of Panama.	July 14.	Inapaquina ¹⁸ .
July 15.	Pastores.	United Fruit Co.	New York via Kingston.	July 14.	Camden.
July 15.	Tela.	United Fruit Co.	New Orleans, La.	July 15.	No. 9664 ¹⁷ .
July 15.	No. 669-M ¹⁷ .	Pan American Airways.	Miami via waypoints.	July 15.	No. 669-M ¹⁷ .
July 15.	Ancon.	Pan American Airways.	San Salvador and waypoints.	July 15.	Zacapa.
July 16.	Daytonian.	Panama Railroad S. S. Line.	New York via Haiti.	July 15.	Cryssen.
July 16.	Bolivar.	Leyland S. S. Line.	Liverpool via waypoints.	July 16.	Tela.
July 17.	Tola.	United Fruit Co.	New York via waypoints.	July 16.	Pastores.
July 17.	Carare.	Elders & Tyfies.	Avonmouth via waypoints.	July 17.	Bolivar.
July 17.	Atlantida.	Royal Netherlands S. S. Co.	New Orleans and Habana.	July 17.	Carare.
July 17.	Cryssen.	Royal Netherlands S. S. Co.	Port Limon, Costa Rica.	July 17.	Tola.
July 17.	Juan Sebastian Elcano.	P. W. Hamilton.	Colon, Rep. of Panama.	July 18.	Atlantida.
July 17.	Annetta I. ¹⁸ .	P. W. Hamilton.	Colon, Rep. of Panama.	July 18.	Carmelia ¹⁹ .
July 18.	Carmelia ¹⁹ .	Standard Fruit and S. S. Co.	Colon, Rep. of Panama.	July 18.	Cryssen.
July 18.	No. 9670 ¹⁷ .	Pan American Airways.	San Salvador and waypoints.	July 18.	Daytonian.
July 18.	No. 300-M ¹⁷ .	Pan American-Grace Airways.	Pimental via waypoints.	July 18.	Daytonian.

PORT OF BALBOA

July 11.	Rakuyo Maru.	Nippon Yusen Kaisha.	Hongkong, China.	July 12.	Rakuyo Maru.	Nippon Yusen Kaisha.	Valparaiso, Chile.
July 15.	San Mateo.	United Fruit Co.	San Francisco, Calif.	July 14.	Nueva Panama ²⁰ .	United Fruit Co.	Panama Bay, R. P.
July 17.	A. B. De Ovarrio ¹⁹ .	A. Valdez.	Panama Bay, R. P.	July 16.	A. B. De Ovarrio ¹⁹ .	A. Valdez.	San Francisco, Calif.
July 17.	Des Hermanos ¹⁹ .	A. Valdez.	Panama Bay, R. P.	July 17.	Des Hermanos ¹⁹ .	Des Hermanos ¹⁹ .	Panama Bay, R. P.
July 17.	Nueva Panama ²⁰ .	Hans Elliott.	Panama Bay, R. P.	July 17.	Nueva Panama ²⁰ .	Hans Elliott.	Panama Bay, R. P.
July 17.	Real ¹⁹ .	Hans Elliott.	Panama Bay, R. P.	July 17.	Real ¹⁹ .	Hans Elliott.	Panama Bay, R. P.

* Other than ships passing through the Canal.

¹⁷ Air mail carrier. ¹⁸ Motor boat. ¹⁹ Motor schooner. ²⁰ Motor ship.

Prices of Miscellaneous Supplies at Panama Canal Storehouses.

The following are prices, including the 25 per cent surcharge, to individuals and companies, effective July 21, 1931.

Commodities.	Unit.	Price.
Brass, bar, average.	Lb.	\$0.24
Brass, sheet, average.	Lb.	.24
Bronze, Tobin, average.	Lb.	.24
Gasoline, motor grade.	Gal.	.105
Metal, yellow.	Lb.	.23
Oakum, Navy, spun.	Lb.	.16
Oakum, Navy, unspun.	Lb.	.15
Oil, fuel, at Balboa and Cristobal, in bulk, no surcharge.	Bbl. of 42 gals.	1.50
Oil, ammonia, cylinder.	Gal.	.23
Oil, burning, Colza.	Gal.	1.06
Oil, engine, gas, in drums, Gulftriton Med. No. 2135.	Gal.	.33
Oil, engine, gas, extra heavy, in cases, Gulftriton No. 2250.	Gal.	.45
Oil, engine, gas, extra heavy, in drums, Gulftriton, No. 2250.	Gal.	.38
Oil, kerosene, in drums.	Gal.	.07
Oil, marine engine.	Gal.	.40
Paint, lead, white, dry.	Lb.	.14
Paint, lead, white, in oil.	Lb.	.11
Paint, zinc oxide, dry.	Lb.	.10
Paint, zinc oxide, in oil.	Lb.	.11
Grease, gear, chain and wire rope, lubricating.	Lb.	.05
Grease, yellow, cup, No. 3.	Lb.	.08
Grease, yellow, cup, No. 5.	Lb.	.09
Soda, ash.	Lb.	.03
Waste, cotton, colored.	Lb.	.13
Waste, cotton, white.	Lb.	.15

Facilities for Shipping.

The Panama Canal is equipped with all the facilities for the fueling, supply, and repair of ships which are found in modern ports.

The coaling plants, with an aggregate storage capacity of 700,000 tons, can bunker ships up to 1,500 tons an hour, practically as fast as it can be handled in ships bunkers. Oil can be delivered as fast as the ships can take it, from ample stocks at both ends of the Canal. Crude fuel oil, Diesel oil, and gasoline are sold.

The ships' chandlery storehouses carry a wide variety of marine supplies and spare parts. The commissary stores sell foodstuffs, fresh meats, fruits, and vegetables, as well as clothing and a general line of goods for supplying about 30,000 people resident on the Isthmus. Ice plants, a large laundry, hotels, hospitals, and restaurants serve the passengers and crews of ships.

A 1,000-foot dry dock, capable of receiving the largest ships built, a smaller dry dock, floating cranes, foundry, and amply equipped shops, employing about 1,100 men, provide means of making practically any kind of marine repairs.

Ample space exists at either terminal of the Canal for the berthing of vessels, as well as large covered piers for the storage of cargo. These are modern structures, fireproof, ratproof, in splendid condition, well lighted and maintained in a clean and orderly condition.

In general, the services to shipping at the Canal are such as have been developed and found ample and effective in the course of handling large traffic through the Canal in over 15 years of operation.

Current Net Prices on Fuel Oil, Diesel Oil, and Coal.

Crude fuel oil is delivered to vessels at either Cristobal or Balboa, from tanks of The Panama Canal, for \$1.50 per barrel of 42 gallons.

Crude fuel oil and Diesel oil are also sold by private companies with tanks at the Canal terminals, at prices which will be quoted by them on application. The prices at present are as follows: Crude fuel oil, \$1 per barrel at Balboa and 95 cents and \$1 at Cristobal; Diesel oil \$1.45 per barrel at Balboa and Cristobal.

Coal, bunker, Navy Standard, is supplied to steamships including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump, or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal for cargo is sold only by special authority of the Governor, at prices quoted upon application.

Deliveries of coal to individual ships can be made up to 1,500 tons per hour, as fast as it can be handled in the ship's bunkers. Oil deliveries can be made up to 5,500 barrels per hour, rate depending on gravity of oil, location of shore tanks, and ship's facilities for handling.

Provisions Required by Ships.

The Panama Canal Commissary Division, with facilities at Balboa and Cristobal for delivery of supplies to steamships, carries a complete line of provisions, such as meats, fruits, vegetables, eggs, butter, canned goods, cigars, cigarettes, tobacco, etc., which are sold to ships at reasonable prices. Beef especially is available at low prices, hind-quarters selling at 14½ cents per pound and forequarters at 12 cents per pound.

Orders may be placed in advance by radio for delivery on arrival, or at either terminal for prompt delivery or for delivery at the other terminal after transit. All vessels are boarded on arrival by a representative of the Commissary Division.

Publication of Notices and Circulars of Interest to Shipping.

All of the Panama Canal notices to mariners, notices to steamship lines and general circulars of interest to shipping in its relation to the Canal are published in THE PANAMA CANAL RECORD. For this reason it is considered unnecessary to make a separate general distribution away from the Isthmus of such notices and circulars to those receiving THE PANAMA CANAL RECORD. Shipping interests are advised to look for them in this paper, which is supplied to them without charge.

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Tanker Traffic Through the Panama Canal During Fiscal Year 1931.

During the fiscal year ended June 30, 1931, 944 tank ships transited the Canal, carrying 5,102,836 tons of cargo, principally mineral oil products. These vessels had a total net tonnage of 5,284,873 tons, and paid \$4,682,320.14 in tolls.

Tank ships comprised 17.1 per cent of the total commercial transits; made up 19.0 per cent of the net tonnage (Panama Canal measurement); paid 19.0 per cent of the total tolls collected; and carried 20.3 per cent of the total cargo in transit through the Canal.

Tanker traffic for the past year was the lowest since the fiscal year 1923, which was the beginning on a large scale of shipments of this commodity from the California fields. Shipments of mineral oils via the Canal have shown a gradual reduction since the beginning of the year (as will be noted in a table in another part of this statement showing traffic month by month), dropping to the low mark of 49 transits in June, 1931. These reduced shipments are no doubt due to the reported curtailed output in the California fields.

With respect to its proportion to the total traffic, tanker traffic was lower than the fiscal year 1930, except for cargo which was approximately the same. In comparison with the fiscal year 1929, a relative increase was shown in transits and cargo, while the percentages of the tolls collected were approximately the same. The Panama Canal net tonnage of the 1931 tanker traffic was slightly under the net tonnage of 1929.

Expressed in terms of percentage, the following tabulation shows the proportion of tanker traffic through the Canal in the past 5 years:

Fiscal year.	Per cent of total traffic.			
	No. of transits.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
1931.....	17.1	19.0	19.0	20.3
1930.....	19.7	21.9	21.3	20.2
1929.....	16.8	19.6	18.9	17.9
1928.....	17.3	21.2	20.1	19.7
1927.....	24.2	29.1	27.4	26.1

The number and aggregate net tonnage, tolls, and cargo of tank ships transiting the Canal during the fiscal year 1931, segregated by direction of transit and nationality of vessels, are shown in the following tabulation, with comparative totals for the preceding 4 fiscal years:

	No. of ships.	Panama Canal net tonnage.	Tolls.	Tons of cargo.
Belgian.....	4	20,338	\$23,316.25	33,477
British.....	194	1,018,644	933,245.31	1,064,103
Danish.....	9	48,137	43,597.11	54,571
Danzig.....	27	184,928	165,459.25	185,982
Dutch.....	3	12,742	11,790.74	14,745
French.....	17	89,381	83,926.83	90,053
German.....	16	65,414	58,295.39	60,916
Italian.....	2	8,640	7,736.65	7,292
Norwegian.....	93	500,553	442,471.24	453,040
Panamanian.....	2	13,100	11,850.50	12,817
Swedish.....	4	27,592	21,820.09	12,132
United States.....	573	3,295,404	2,878,810.78	3,113,708
Total, fiscal year, 1931.....	944	5,284,873	4,682,320.14	5,102,836
Total, fiscal year, 1930.....	1,218	6,564,138	5,768,963.28	6,071,378
Total, fiscal year, 1929.....	1,083	5,844,263	5,145,632.19	5,512,481
Total, fiscal year, 1928.....	1,121	6,243,969	5,436,437.16	5,829,722
Total, fiscal year, 1927.....	1,324	7,624,112	6,658,806.90	7,250,579

The number of tank ships passing through the Canal each month during the fiscal year ended June 30, 1931, the tons of cargo carried, and the percentage of which the tanker traffic formed of transits, net tonnage, tolls, and cargo, are summarized in the following table:

Tanker traffic.			Percentage which tanker traffic formed of—			
Month.	Transits.	Tons of cargo.	Transits.	Panama Canal net tonnage.	Tolls collected.	Cargo.
1930.						
July.....	120	688,237	24.6	26.9	27.0	28.7
August.....	95	490,437	20.4	22.4	22.2	22.8
September.....	94	466,264	20.5	23.0	22.7	22.6
October.....	93	493,146	18.0	20.5	20.4	20.6
November.....	83	441,841	17.3	19.3	19.2	19.5
December.....	77	418,138	15.6	17.5	17.3	19.3
1931.						
January.....	78	473,266	16.4	17.8	18.6	22.5
February.....	60	301,655	13.9	15.7	15.4	15.6
March.....	65	302,793	14.8	16.4	15.9	15.8
April.....	69	419,797	15.2	17.6	18.1	20.9
May.....	61	330,034	14.3	15.7	15.8	17.1
June.....	49	277,228	12.3	13.7	13.8	15.8
Total.....	944	5,102,836	17.1	19.0	19.0	20.3

Transits per month of tankers ranged from a maximum of 120 (July, 1930), to a minimum of 49 (June, 1931). Cargo carried in tankers varied from 688,237 tons (July, 1930) to 277,228 tons (June, 1931). Tanker traffic in June, 1931, was the lowest since the beginning of the heavy California shipments in 1922. The average per month for the past year was 78.7 transits and 425,236 tons of cargo, as compared with 101.5 transits and 505,948 cargo tons for the previous fiscal year.

Of the 5,102,836 tons of tanker cargo passing through the Canal during 1931, 218,723 tons were from the Atlantic to the Pacific and 4,884,113 tons from the Pacific to the Atlantic. The 218,723 tons from the Atlantic included 31,542 tons of creosote—21,842 tons from Europe to the United States; 5,200 tons from Europe to Canada; and 4,500 tons from the east coast of Canada to the west coast of Canada. The balance of the westbound tanker cargo—187,181 tons—consisting of mineral oils, came from the United States, Mexico, and West Indies, and was destined to the United States, Far East, South America, and Balboa, Canal Zone.

In the 4,884,113 tons of tanker cargo originating in the Pacific areas, there were included 45,911 tons of coconut oil and 12,652 tons of molasses from the Philippine Islands to the United States; 30,815 tons of molasses from the Hawaiian Islands to the United States; 12,600 tons of molasses from the Hawaiian Islands to Europe; and 19,000 tons of whale oil from Australasia to the United States. Mineral oils from the Pacific aggregated 4,763,135 tons, approximately 81 per cent of which originated in California and 19 per cent in Peru and Ecuador. This oil tonnage was destined as follows: 63.6 per cent to the United States; 24.1 per cent to Europe; 7.7 per cent to Canada; and the balance, 4.6 per cent, to the West Indies, Cristobal, and South America.

Of the mineral oil carried in tankers through the Canal during the fiscal year 1931, approximately 70 per cent was gasoline, benzine, or naphtha; 15 per cent crude oil; 13 per cent gas and fuel oils; and the remaining 2 per cent lubricating oils or kerosene.

"Tusitala" Towed into Cristobal.

The square-rigged sailing vessel *Tusitala*, owned by James A. Farrell, president of the United States Steel Corporation, arrived at Cristobal on the afternoon of July 21 in tow of the Panama Canal tug *Favorite*, which had gone to the aid of the square-rigger when she had become becalmed when some 50 miles out from Cristobal. The vessel, which was en route from New York to Honolulu with a cargo of sulphate of ammonia, left New York on June 28.

The *Tusitala* is a frequent visitor at the Canal having made 15 transits. The last previous passage occurred on March 13, 1931, when she was en route from Honolulu to New York with a cargo of 2,380 tons of sugar.

The *Tusitala* is 260 feet long, 39 feet beam, and of 1,748 gross tons. Built in Greenock, Scotland, in 1883, she is said to be the only remaining vessel of her type sailing the seas to-day flying the American flag in active overseas commercial pursuits.

Except for an occasional visit of the *Tusitala*, very few sailing vessels have applied for transit of the Canal in recent years. In the early years of the Canal, however, particularly during the World War, passages of sailing vessels were more frequent, principally in the nitrate trade. The peak year for sailing traffic was 1918, when there were 73 transits, 55 of which vessels flew the French flag.

Notice to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 22, 1931.

No. 913.

Colombia, Cartagena Harbor entrance, Boca Chica channel buoy established. The following is quoted from Notice to Mariners No. 27, dated Washington, D. C., July 4, 1931:

The master of the American steamship *El Salvador* reports that a buoy has been established on the western extremity of the shoals eastward of Fort San Fernando, on the northern side of Boca Chica channel, in latitude 10° 19' 15" N., longitude 75° 33' 55" W.

H. BURGESS,
Governor.

MOVEMENTS OF OCEAN VESSELS.

Week ending at midnight, July 25, 1931.

THROUGH THE CANAL—ATLANTIC TO PACIFIC.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.		Panama Canal tonnage.	
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.								Nature.	Tonn.	Gross.	Net.
Venezuela	17	20	25	19	6	05	19	12	35	20	16	25		New York, N. Y.	San Francisco, Cal.	General	2,742	6,033	4,353
Chinese Prince	18	30	55	19	6	10	19	13	35	19	14	50		New York, N. Y.	Manila, P. I.	General	3,641	9,254	6,265
Narragansett	18	21	55	19	6	50	19	13	51	19	14	50		Elizabethtown, Eng.	Los Angeles, Calif.	Ballast	.....	7,020	5,051
Sun	18	23	00	19	7	10	19	14	31	19	16	25		Chester, Pa.	Los Angeles, Calif.	Ballast	.....	9,620	6,476
Livingston	19	4	25	19	8	40	19	15	41	19	17	20		New York, N. Y.	Los Angeles, Calif.	Ballast	.....	8,491	6,065
Roe	19	7	12	19	9	50	19	16	21	19	17	20		New York, N. Y.	Saigon, China	General	6,488	7,410	5,223
Niel Maersk	18	21	10	19	11	30	19	18	01	19	19	16		Hamburg, Germany	Corral, Chile	General	1,200	7,834	6,018
Bodegraven	19	7	10	19	12	20	19	19	39	19	21	30		Amsterdam, Holland	Long Beach, Calif.	Crocoite	5,126	6,205	4,339
Manatway	19	7	10	19	13	40	19	20	59	19	21	45		Baltimore, Md.	Seattle, Wash.	General	6,131	8,310	6,005
Hanley	18	13	30	19	10	30	19	17	35	20	20	50		Baltimore, Md.	Seattle, Wash.	General	105	8,854	5,360
Cuyama	19	12	15	19	10	30	19	17	35	20	20	50		Baltimore, Md.	Seattle, Wash.	General	3,494	6,755	4,805
Heranger	19	12	15	19	11	55	19	18	32	20	19	45		Philadelphia, Pa.	Los Angeles, Calif.	General	3,012	9,742	6,373
San Marcos	20	16	00	19	6	10	19	17	45	21	18	50		Philadelphia, Pa.	Seattle, Wash.	General	3,237	6,138	4,354
Tidewater	21	10	45	21	11	00	21	17	45	21	18	50		New York, N. Y.	San Francisco, Cal.	General	3,525	6,440	4,822
City of Manila	21	11	35	21	11	45	21	19	38	21	21	00		New York, N. Y.	San Francisco, Cal.	General	2,404	6,766	4,767
Pacific Cedar	21	12	45	21	12	55	21	20	04	21	21	24		Norfolk, Va.	Seattle, Wash.	General	2,665	1,802	1,046
Christiana	21	16	00	21	16	20	21	23	35	22	22	18		New York, N. Y.	Townsville, Aus'tia	General	3,194	8,695	6,375
Hawaiian	21	19	45	21	20	20	22	9	04	22	22	15		Boston, Mass.	San Francisco, Cal.	General	1,487	6,311	4,704
New York	22	3	50	22	6	25	22	13	55	22	14	45		Providence, R. I.	Los Angeles, Calif.	General	3,000	6,653	4,863
Tusitula	21	14	00	22	6	25	22	15	10	22	21	50		New York, N. Y.	Honolulu, T. H.	Sulf' ammonia	.....	255	129
T. J. Williams	22	2	30	22	8	05	22	15	22	22	16	20		Philadelphia, Pa.	Los Angeles, Calif.	Ballast	1,526	4,791	3,392
Robert	22	2	30	22	8	05	22	15	22	22	16	20		Philadelphia, Pa.	Los Angeles, Calif.	Ballast	4,627	6,903	5,185
Lukenbach	22	10	22	22	10	55	22	17	36	22	18	58		Boston, Mass.	Portland, Oreg.	General	2,760	6,242	4,471
Knut Hansun	22	21	15	22	13	45	22	21	10	22	22	15		Newport News, Va.	Talcahuano, Chile	General	4,216	9,576	6,673
Marian Odis	22	11	22	22	13	45	22	21	31	22	22	15		Boston, Mass.	Portland, Oreg.	General	2,436	9,965	6,656
Chandler	22	16	05	22	16	10	22	22	30	22	23	19		Baltimore, Md.	Los Angeles, Calif.	General	195	2,563	1,310
Skeena	22	18	04	23	6	00	23	12	26	23	18	15		Baltimore, Md.	Los Angeles, Calif.	General	1,950	10,687	6,633
Mary Pinchot	22	18	04	23	6	00	23	12	26	23	18	15		Baltimore, Md.	Los Angeles, Calif.	General	.....	.....	.....
Alda	22	7	45	23	7	10	23	13	18	23	15	40		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Titanian	22	7	45	23	8	20	23	14	25	23	15	40		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Massar	23	8	50	23	9	20	23	16	26	23	17	48		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Hermus	23	10	15	23	12	00	23	18	46	23	19	48		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Silverdanda	23	12	55	23	13	05	23	18	55	23	20	05		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Este	22	17	40	23	14	00	23	21	42	23	22	21		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Alma	23	6	15	24	6	05	24	13	48	24	18	45		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....
Santa Barbara	23	14	05	24	6	10	24	13	48	24	20	30		Havannah, Ga.	Los Angeles, Calif.	Ballast	.....	.....	.....

* Transp.

* Yacht.

* Destroyer.

* Sailing ship.

* Motor ship.

* Tanker.

President Hayes	24	5.55	24	7.25	24	14.28	24	21.30	American	Dollar Line	522.0	63.0	24.0	New York, N. Y.	Round the world.	General	9,737,12,023	8,443
Langager	23	22.20	24	7.30	24	14.56	24	16.00	Norwegian	Anglo-Saxon Pet. Co.	473.6	64.5	20.8	Thameshaven Eng.	Los Angeles, Calif.	Ballast	9,626	6,839
F. J.	24	00.50	24	8.30	24	15.35	24	17.05	American	Luckenbach Line	446.0	56.0	24.0	Houston, Tex.	Seattle, Wash.	General	4,300	8,508
Lake Ormeo	24	2.30	24	8.35	24	17.31	24	19.15	American	Ford Motor Co.	261.0	42.6	17.3	Chesler, Pa.	Seattle, Wash.	Auto parts	1,753	2,758
Sutrine	23	13.15	24	9.04	24	16.54	24	16.55	American	United Fruit Co.	337.0	41.9	17.10	Cristobal, C. Z.	San Francisco, Cal.	Ballast	3,667	2,329
Pennith	24	7.25	24	9.35	24	16.41	24	17.43	British	Barber S. S. Line	464.6	60.0	21.0	New York, N. Y.	Hongkong, China	General	4,176	8,859
Point Fernin	24	11.50	24	12.00	24	19.10	24	20.10	American	Wayne & Hoyt	324.0	46.2	18.6	New Orleans, La.	Seattle, Wash.	Coke, general	2,126	3,984
Cauca	24	18.10	24	11.40	24	19.48	24	23.15	Colombian	National Navigation Co.	107.4	23.0	8.8	Cristobal, C. Z.	Buenaventura, Col.	General	80	262
Poma	24	12.05	24	14.25	24	20.01	24	20.11	Norwegian	Anglo-Saxon Pet. Co.	451.0	50.2	20.0	Portland, Me.	Los Angeles, Calif.	Ballast	8,318	5,667
Pomona	24	19.40	24	19.50	24	28.56	24	30.00	American	Islandian S. S. Lines	430.0	56.0	18.0	Baltimore, Md.	Seattle, Wash.	Steel, general	1,813	3,824
Anasas	24	13.45	25	6.05	25	13.05	25	13.55	German	Hamburg-American Line	436.0	53.0	13.0	Hamburg, Germany	San Antonio, Chile	General	2,721	6,036
Calli	24	23.35	25	9.12	25	16.00	25	17.15	German	Roland Line	328.0	53.0	13.0	Cristobal, C. Z.	Guayaquil, Ecuador	General	1,350	1,105
Fella	24	19.30	25	10.55	25	17.32	25	21.00	Italian	Nav. Libera-Tristina	430.0	56.2	18.2	Trieste, Italy	Vancouver, B. C.	General	1,315	7,784
Baldutte	25	12.30	25	12.45	25	19.29	25	20.55	American	Pennsylvania Ship. Co.	416.9	56.2	21.0	New York, N. Y.	Vancouver, B. C.	Ballast	6,706	4,770
Steel Worker	25	13.45	25	13.55	25	22.25	26	4.18	American	Islandian S. S. Lines	424.2	56.2	25.6	Galveston, Tex.	Callecut, India	Steel, general	8,107	7,611
Bevan Murray	25	16.50	25	17.00	26	8.45	26	16.00	British	Adminis. del Guano	332.0	48.0	15.9	Norfolk, Va.	Callao, Peru	Ballast	3,636	2,498

* Motor ship.

* Tanker.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.

Northern	19	00.45	19	6.00	19	15.45	19	15.45	American	Sun Oil Co.	480.6	66.9	28.5	Los Angeles, Calif.	Chester, Pa.	Gasoline	13,582	9,761
Christy Payne	19	00.45	19	6.36	19	17.20	19	17.20	American	Shell Petroleum Co.	463.3	60.2	27.0	Los Angeles, Calif.	New York, N. Y.	Gasoline	10,529	8,501
Willmott	18	20.30	19	7.28	19	17.40	19	17.45	American	Amer-Hawaiian Line	390.0	54.2	23.0	Seattle, Wash.	Baltimore, Md.	Lumber, general	6,500	6,162
Vancouver City	18	00.30	19	7.50	19	18.20	19	18.20	British	Balfour Guthrie Co.	420.4	54.5	26.5	Seattle, Wash.	Cobh, Ireland	Wheat	7,700	6,870
Langfearn	17	22.30	19	8.17	19	19.25	19	20.30	British	F. Carrick & Co.	416.0	55.8	25.0	Vancouver, B. C.	Hampton Roads	Wheat	8,565	6,671
Ville de	19	6.30	19	8.25	19	17.05	19	21.10	French	Messageries Maritimes	411.0	53.8	25.0	Noumea, N. Calid.	Marseilles, France	Copra, general	3,844	7,677
Strasbourg	19	15.25	19	16.15	20	15.50	20	15.50	British	Inter. Petroleum Co.	565.7	75.6	35.0	Talara, Peru	Halifax, N. S.	Crude oil	21,200	16,780
C. O.	19	17.50	19	18.19	20	13.35	20	13.35	American	Luckenbach Line	401.8	52.2	24.0	Portland, Ore.	Mobile, Ala.	Lumber, general	4,418	6,002
Florence	19	3.00	20	6.55	20	16.00	20	16.00	American	Nelson Line	380.4	53.1	23.0	Seattle, Wash.	New York, N. Y.	Lumber, general	6,213	5,659
Charles Nelson	20	5.05	20	8.07	20	15.00	21	00.08	American	Grace Line	483.3	56.2	28.2	Arica, Chile	New York, N. Y.	General	3,837	11,680
Knute Nelson	20	16.45	20	17.28	21	12.05	21	21.13	Norwegian	Fred Olsen & Co.	435.9	56.2	28.2	Vancouver, B. C.	Cato, Norway	General	8,377	8,016
St. Michel	20	6.15	21	6.16	21	13.45	22	11.00	American	U. S. Army	448.0	58.0	20.0	Balboa, C. Z.	New York, N. Y.	Army supplies	1,954	5,710
El Salvador	20	14.38	21	6.35	21	13.40	22	9.30	American	Panama Mail S. S. Co.	360.2	51.6	22.1	San Francisco, Cal.	New York, N. Y.	Coffee, general	7,629	6,172
Indian	20	14.38	21	7.11	21	15.45	21	15.45	Danish	Comyn & Co.	390.7	53.2	27.2	Vancouver, B. C.	Charlham, Eng.	Lumber, whit.	5,669	10,491
Virginian	20	20.00	21	7.32	21	16.45	21	16.45	American	Amer-Hawaiian Line	490.5	58.2	26.2	Portland, Ore.	Boston, Mass.	General	5,669	10,491
Dorothy	21	6.35	21	8.00	21	17.10	21	17.10	American	Luckenbach Line	448.9	60.2	31.0	Portland, Ore.	Boston, Mass.	Lumber, general	10,000	9,294
Lucienbach	21	11.40	21	12.27	21	20.05	22	1.08	American	Pacific-Atlantic S.S. Co.	386.8	52.2	25.0	Port Alice, B. C.	Philadelphia, Pa.	Lumber, general	7,000	5,710
San Gabriel	21	12.30	21	13.17	21	21.20	21	21.20	Danish	W. Tanskiff Rhederei	513.9	68.1	29.0	Talara, Peru	Hamburg, Germany	Naphtha	14,648	11,646
Semole	21	16.15	21	17.30	22	10.55	22	10.55	American	Roosevelt S. S. Co.	401.9	54.2	27.3	Gedong, Japan	New York, N. Y.	General	7,260	6,972
Jedmore	21	14.45	21	18.13	22	11.40	22	11.40	British	Balfour Guthrie & Co.	375.0	52.6	25.1	Portland, Ore.	Belfast, Ireland	Wheat	7,450	6,050
K. R.	21	21.13	22	6.11	22	13.55	22	14.35	American	Shell Oil Co. of Calif.	440.0	58.2	28.1	Los Angeles, Calif.	Sewaren, N. J.	Gasoline	9,447	9,033

* Lumber, grain, and general.

* For orders.

* Motor ship.

* Tanker.

MOVEMENTS OF OCEAN VESSELS.—Continued.

THROUGH THE CANAL—PACIFIC TO ATLANTIC.—Continued.

Ship.	Arrived at port.		Entered Canal.		Completed transit.		Cleared for sea.		Nationality.	Line (Charterer or operator.)	Length.	Beam.	Salt water draft.	From—	For—	Cargo.	Panama Canal tonnage.		
	Day.	Hour.	Day.	Hour.	Day.	Hour.	Day.	Hour.									Tons.	Net.	
Baldhill	21	23.00	22	6.39	22	14.55	22	14.55	American.	Shell Eastern Pet. Co.	416.8	56.1	27.0	Los Angeles, Calif.	Perth Amboy, N. J.	(*)	9,505	6,721	4,680
Mundines	22	11.45	22	12.28	22	19.56	22	19.56	American.	Munson, McCork's Line.	370.0	53.0	24.4	Tacoma, Wash.	New York, N. Y.	Lumber, general.	5,000	5,325	4,187
Pacific Spruce.	22	13.00	22	13.51	22	21.25	22	21.25	American.	Dimon S. S. Corp.	410.5	54.0	25.0	Seattle, Wash.	Norfolk, Va.	Lumber, general.	7,600	6,624	4,757
Birmingham City	22	17.25	22	18.25	22	12.10	22	12.10	American.	Isthmian S. S. Lines	395.5	55.0	26.5	Honolulu, T. H.	Baltimore, Md.	Sugar, general.	8,549	7,304	5,138
Suriname	22	12.05	23	6.20	23	13.15	24	9.04	American.	United Fruit Co.	336.7	41.9	20.0	San Francisco, Cal.	Cristobal, C. Z.	Coffee, general.	514	3,667	2,329
Portland	22	12.13	23	6.45	23	14.15	24	2.50	German.	Hamburg-American Line	462.2	61.2	26.3	Vancouver, B. C.	Hamburg, Germany	General.	7,868	9,139	6,666
Barbara Cates.	22	23.59	23	7.22	23	16.20	23	16.20	American.	Sudden & Christenson.	409.5	54.2	24.3	Vancouver, B. C.	Baltimore, Md.	Lumber.	7,591	6,404	4,852
Wisconsin.	23	5.00	23	7.37	23	15.20	24	11.15	French.	French Line	493.6	61.3	26.5	Vancouver, B. C.	Le Havre, France.	General.	6,891	10,459	7,110
Barat.	23	11.15	23	11.55	23	18.30	26	10.35	Dutch.	Royal Neth. S. S. Co.	202.9	33.1	12.5	Buenaventura, Col.	Cristobal, C. Z.	General.	507	1,182	742
Illinois	23	15.35	24	6.34	24	13.20	24	13.20	American.	The Texas Co.	416.8	56.1	25.0	Pt. San Luis, Calif.	Pt. Arthur, Tex.	Gasoline.	7,414	6,945	5,011
American	24	4.30	24	7.11	24	14.40	24	14.40	American.	Amer-Hawaiian Line.	404.6	53.9	24.0	Seattle, Wash.	Boston, Mass.	Lumber.	5,000	6,777	4,761
Albert Vogler	24	5.45	24	7.33	24	16.05	24	22.30	German.	Hamburg-American Line	409.8	52.8	23.0	Corral, Chile.	Hamburg, Germany	General.	6,467	7,173	5,514
Caldas	23	24.45	24	7.50	24	15.45	24	15.45	Colombian.	National Navigation Co.	116.0	21.1	10.0	Buenaventura, Col.	Cristobal, C. Z.	General.	188	211	124
Baskoop.	24	13.40	24	14.35	24	22.25	25	10.40	Dutch.	Royal Neth. S. S. Co.	400.6	58.3	25.0	Talcahuano, Chile.	Hamburg, Germany	General.	8,400	7,817	6,097
Cerro.	24	16.50	24	17.28	25	11.30	25	11.30	German.	Hamburg-American Line	227.2	34.4	14.2	Guayaquil, Ecuador	Cristobal, C. Z.	Coffee, general.	601	1,572	1,011
Lieut. Col. H. C. Schumann			25	7.38	25	13.30	25	13.30	American.	U. S. Army	393.2	54.3	27.0	Balboa, C. Z.	Cristobal, C. Z.	Ballast.	7,436	6,573	4,629
Wicand.	25	8.45	25	9.48	25	17.35	25	20.15	German.	North German Lloyd.	386.8	52.2	23.1	Valparaiso, Chile.	Hamburg, Germany	General.	6,080	5,705	4,167
Pont Salinas.	25	9.15	25	10.05	25	17.35	25	17.35	American.	Gulf Pac. Redwood Line	461.9	60.6	25.0	Portland, Oreg.	Tampa, Fla.	Lumber, general.	5,375	9,870	6,967
Tai Shan	24	21.00	25	11.23	25	18.30	26	1.40	Panamaian.	Barber S. S. Line.	461.9	60.6	25.0	Iloilo, P. I.	New York, N. Y.	General.	5,375	9,870	6,967
No. 4649	24	21.00	25	11.23	25	18.30	26	1.40	American.	L. D. Valkenburg.	461.9	60.6	25.0	Miraflores Lake	Balboa, C. Z.	Ballast.	5,375	9,870	6,967

¹ Tanker.¹⁰ Motor ship.¹¹ Tug.¹² Kerosene and gasoline.¹³ Sail boat.

All hours are expressed on the 24-hour basis and all hours greater than 12 are postmeridian.

PORT OF CRISTOBAL.

* ARRIVALS.				* DEPARTURES.			
Date.	Vessel.	Line.	From—	Date.	Vessel.	Line.	For—
July 19.	Tela.	United Fruit Co.	Port Limon, Costa Rica.	July 19.	No. 9088 ¹⁴ .	Pan American Airways.	San Salvador and waypts.
July 19.	No. 145-M ¹⁴ .	Pan American Airways.	Barraquilla, Colombia.	July 19.	No. 669-M ¹⁴ .	Pan American Airways.	Miami via wayports.
July 19.	No. 668-M ¹⁴ .	Pan American Airways.	Miami via wayports.	July 19.	No. 945-M ¹⁴ .	Pan American-Grace Airways.	Talara via wayports.
July 20.	Peron.	French Line.	St. Nazaire via wayports.	July 19.	Tela.	United Fruit Co.	New Orleans, La.
July 21.	Pastors.	United Fruit Co.	Santa Marta, Colombia.	July 19.	No. 145-M ¹⁴ .	Pan American Airways.	Barraquilla, Colombia.
July 21.	Lizzie D. Peabody ¹⁵	Martinez & May.	Cartagena, Colombia.	July 19.	Ancon.	Panama R. R. S. S. Line.	New York via Haiti.
July 21.	No. 945-M ¹⁴ .	Pan American Airways.	Talara via wayports.	July 20.	Amelia L. ¹⁶ .	P. W. Hamilton.	Colon, Rep. of Panama.
¹⁴ Air mail carrier.		¹⁵ Motor schooner.					
		¹⁶ Motor boat.					
			* Other than ships passing through the Canal.				

Police Canvass of Civil Population of Canal Zone.

The annual house-to-house canvass of the civil population of the Canal Zone taken by the Police and Fire Division during the month of June, 1931, resulted in a count of 30,745 as the total number of civilian inhabitants. This was an increase of 445 over the last canvass taken, in June, 1929. The canvass was omitted in 1930, due to the fact that the fifteenth census of the United States, taken in that year, included the Canal Zone.

The Balboa district showed an increase of 1,397, which was accounted for by Balboa, La Boca, and Las Cascadas rural district on west side of Canal.

The Cristobal district showed a decrease of 889 from the previous canvass, the decrease having occurred in the rural districts.

There was a decrease of 394 employees residing in the Canal Zone.

The population, as of June, 1931, was distributed as follows:

	Americans.					All others.					Total.
	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	Total men.	Em- ployees.	Total women.	Em- ployees.	Child- ren.	
Balboa district.....	2,200	1,886	2,146	371	2,095	4,097	2,807	2,699	77	5,352	18,589
Cristobal district....	499	416	658	29	727	3,449	2,334	2,111	148	4,600	12,044
Prisoners.....	12					98		2			112
Total employees....		2,302		400			5,141		225		8,068
Total inhabitants..	2,711		2,804		2,822	7,644		4,812		9,952	30,745

* Includes 373 civilian employees of the Army and Navy.

Notices to Mariners.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 28, 1931.

No. 914.

Panama Canal, Pacific entrance, range light temporarily discontinued.—Rear range light No. 4, southbound, in the Pacific entrance of the Panama Canal, has been temporarily discontinued due to damage to the transmission line. It will be reestablished as soon as the necessary repairs can be accomplished.

H. BURGESS,
Governor.

THE PANAMA CANAL, EXECUTIVE DEPARTMENT,
BALBOA HEIGHTS, C. Z., July 29, 1931.

No. 915.

Caribbean Sea, Old Providence Island Light reported not burning.—The following radio message was received at 1.16 a. m., from the S. S. *Tela*:

Old Providence Island Light was not burning on the night of July 28-29, 1931.

Approximate position: Latitude 13° 19' 20" N., longitude 81° 23' 18" W. (Signed) S. S. *Tela*.

H. BURGESS,
Governor.

Coal.

Coal, bunker, Navy Standard, is supplied to steamships, including warships of all nations, trimmed in bunkers at \$7.25 at Cristobal and \$10.25 at Balboa per ton of 2,240 pounds. Extra charges are made in accordance with a published tariff for special trimming at the request of the officers of the ship, for galley, lump or run-of-mine coal in sacks, and for delivery, when coal is furnished from lighters or launches away from the coaling piers.

Coal can be bunkered by bunkering machines at any rate up to 1,500 tons per hour, regulated by the amount of necessary trimming.

Coal for cargo is sold at prices quoted on application and on authorization of the Governor.

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